

# **California High-Speed Train Project**



## **Request for Proposal for Design-Build Services**

**RFP No.: HSR 11-16  
HYBRID Alternative  
Plan, Profile & Typical Sections**

# CALIFORNIA HIGH-SPEED TRAIN

## Track Alignment Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
Merced to Fresno Section

Plan, Profile & Typical Sections  
HYBRID Alternative

May 2011



**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration






2/16/2012 9:30:22 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-0010.dgn shieldsa

SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
	T0010-A	HYBRID ALIGNMENT		INDEX OF DRAWINGS	SHEET 1 OF 1
	T0100-A	GENERAL		ABBREVIATIONS, SYMBOLS AND NOTES	
	T0103-A	HYBRID ALIGNMENT		KEY MAP	SHEET 3 OF 3
	T0150-A	HYBRID ALIGNMENT		TRACK GEOMETRY DATA	SHEET 1 OF 1
	T3000-A	GENERAL		TYPICAL SECTION LIMITS	
	T3001-A			TYPICAL SECTIONS	SHEET 1 OF 17
	T3004-A			TYPICAL SECTIONS	SHEET 4 OF 17
	T3005-A			TYPICAL SECTIONS	SHEET 5 OF 17
	T3006-A			TYPICAL SECTIONS	SHEET 6 OF 17
	T3009-A			TYPICAL SECTIONS	SHEET 9 OF 17
	T3010-A			TYPICAL SECTIONS	SHEET 10 OF 17
	T3011-A			TYPICAL SECTIONS	SHEET 11 OF 17
	T3012-A			TYPICAL SECTIONS	SHEET 12 OF 17
	T3013-A			TYPICAL SECTIONS	SHEET 13 OF 17
	T3014-A			TYPICAL SECTIONS	SHEET 14 OF 17
	T3017-A			TYPICAL SECTIONS	SHEET 17 OF 17
	T1114-A	HYBRID		PLAN AND PROFILE	STA 2030+00 TO STA 2085+00
	T1115-A	HYBRID		PLAN AND PROFILE	STA 2085+00 TO STA 2140+00
	T1116-A	HYBRID		PLAN AND PROFILE	STA 2140+00 TO STA 2195+00
	T1117-A	HYBRID		PLAN AND PROFILE	STA 2195+00 TO STA 2250+00
	T1118-A	HYBRID		PLAN AND PROFILE	STA 2250+00 TO STA 2305+00
	T1119-A	HYBRID		PLAN AND PROFILE	STA 2305+00 TO STA 2360+00
	T1120-A	HYBRID		PLAN AND PROFILE	STA 2360+00 TO STA 2415+00
	T1121-A	HYBRID		PLAN AND PROFILE	STA 2415+00 TO STA 2470+00
	T1122-A	HYBRID		PLAN AND PROFILE	STA 2470+00 TO STA 2525+00
	T1123-A	HYBRID		PLAN AND PROFILE	STA 2525+00 TO STA 2580+00
	T1124-A	HYBRID		PLAN AND PROFILE	STA 2580+00 TO STA 2635+00
	T1125-A	HYBRID		PLAN AND PROFILE	STA 2635+00 TO STA 2690+00
	T1126-A	HYBRID		PLAN AND PROFILE	STA 2690+00 TO STA 2740+55.75
	T1127-A	HYBRID		PLAN AND PROFILE	STA 1713+98 TO 1748+00
	T1128-A	HYBRID		PLAN AND PROFILE	STA 1748+00 TO STA 1801+61.52

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

						DESIGNED BY A. SHIELDS	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	<b>AECOM</b> <small>Technical Services, Inc.</small> 2020 L Street, Suite 300 Sacramento, CA 95811  <b>CH2MHILL</b>	 <b>CALIFORNIA</b> <small>HIGH-SPEED RAIL AUTHORITY</small>	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b>  HYBRID ALIGNMENT  INDEX OF DRAWINGS SHEET 1 OF 1	CONTRACT NO. HSR06-007
						DRAWING NO. T0010-A					
						SCALE NONE					
						SHEET NO. ### OF ###					
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 02/17/2012					

5/1/2011 12:00:37 PM I:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\A1\A1\_GENERAL\_VMF-T-0100.dgn

ABBREVIATIONS

ALIGNMENT

HORIZONTAL	
BC	BEGINNING OF CURVE
CS	CURVE TO SPIRAL
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CIRCULAR CURVES
PCS	POINT OF CURVE TO SPIRAL
PF	POINT OF FROG
PI	POINT OF INTERSECTION OF TWO TANGENTS
PITO	POINT OF INTERSECTION OF TURNOUT
POC	POINT ON CURVE
POS	POINT ON SPIRAL
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PS	POINT OF SWITCH
PSC	POINT OF SPIRAL TO CURVE
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
SC	SPIRAL TO CURVE
SPO	POINT OF ORIGIN OF COMPOUND SPIRAL
SS	POINT OF SPIRAL TO SPIRAL
ST	SPIRAL TO TANGENT
TS	TANGENT TO SPIRAL
V	DESIGN VELOCITY IN MILES PER HOUR
VERTICAL	
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

BEG	BEGIN
BLVD	BOULEVARD
CL	CENTER LINE
CLR	CLEAR
COL	COLUMN
DWG	DRAWING
EQ	EQUATION
EXIST(E)	EXISTING
IN	INCH
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVER HEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL	PROFILE GRADE LINE
RR	RAILROAD
RD	ROAD
R/W ROW	RIGHT OF WAY
RT	RIGHT
SS	SANITARY SEWER
SHT	SHEET
ST	STREET
STD	STANDARD
SD	STORM DRAIN
STRUCT	STRUCTURE
T	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE
TOR	TOP OF RAIL
TK	TRACK
TO	TURNOUT
TYP	TYPICAL
TBD	TO BE DETERMINED
TF	TELECOMMUNICATIONS FIBER
	OPTIC
V VERT	VERTICAL
W	WATER, WEST

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY
	EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
	GAS LINE (16")
	COMMUNICATION LINE
	WATER LINE
	FIBER OPTIC LINE
	ELECTRICAL LINE
	ELECTRICAL TOWER
	SEWER LINE
	STORM DRAIN LINE
	FUEL LINE
	TELEPHONE LINE
	PETROLEUM LINE (12")
	OVERHEAD
	NORTH ARRROW
	PVI

NOTES:

- EXISTING ROADS TO BE GRADE SEPARATED OVER THE HIGH SPEED TRAIN (HST) RIGHT OF WAY ARE INDICATED IN THE ALIGNMENT PROFILE. ALL OTHER ROADS CROSSING THE PROPOSED HST TRACKS WILL BE CLOSED OR RELOCATED. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.
- SEE STRUCTURE PLANS FOR LIMITS AND DETAILS OF VIADUCTS, STREAM CROSSINGS, RETAINING WALLS AND OTHER HST STRUCTURES.
- SEE ROADWAY PLANS FOR ROADWAY RELOCATIONS, GRADE SEPARATIONS, AND MODIFICATIONS TO STATE HIGHWAY FACILITIES.
- UTILITIES INDICATED ON THE PLANS ARE FOR REFERENCE ONLY. SEE "UTILITIES CONFLICT MEMO" FOR ADDITIONAL INFORMATION AND PROPOSED RELOCATION CONCEPTS.
- ROAD/LOCAL ACCESS DELINEATED FOR FURTHER EVALUATION. ADDITIONAL STUDIES WILL BE CONDUCTED DURING PRELIMINARY ENGINEERING PHASE (30% DESIGN) TO SUBSTANTIATE ITS INCLUSION OR EXCLUSION FROM THE PROPOSED IMPORVEMENTS.

Shie.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY B. CHAN
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE 04/29/2011

<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>
<b>NOT FOR</b> <b>CONSTRUCTION</b>



Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811





**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
GENERAL


ABBREVIATIONS, SYMBOLS AND NOTES

CONTRACT NO. HSR06-007
DRAWING NO. T0100-A
SCALE NO SCALE
SHEET NO. ### OF ###





"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

						DESIGNED BY A. SHIELDS	<b>RECORD SET</b>  <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	<b>AECOM</b> Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811  <b>CH2MHILL</b>	 <b>CALIFORNIA</b> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b>				CONTRACT NO.
						DRAWN BY H. SULLIVAN				DRAWING NO.				
						CHECKED BY A. BOONE				T0103-A				
						IN CHARGE A. BOONE				SCALE				
						DATE 07/27/2011				NO SCALE				
REV	DATE	BY	CHK	APP	DESCRIPTION					KEY MAP SHEET 3 OF 3				SHEET NO. ### OF ###

2/16/2012 9:31:09 AM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\WF-T-0150A.dgn shieldsa

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-HYBRID MAIN LINE SB

CURVE	DESIGN SPEED (V) (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION (Ea) (IN)	UNBALANCED SUPERELEVATION (Eu) (IN)	SPIRAL LENGTH (Ls) (FT)	BEGIN STATION	END STATION	BEGIN DRAWING
HYBRID202	250	28000	6.00	2.93	2000	2106+38.05	2169+50.77	T1115-A
HYBRID203	250	28000	6.00	2.93	2000	2280+10.37	2414+40.72	T1118-A
HYBRID204	250	28016.5	6.00	2.93	2000	2458+01.31	2561+46.71	T1121-A
HYBRID205	250	28016.5	6.00	2.93	2000	2599+58.87	2731+68.17	T1124-A

TRACK ALIGNMENT CURVE DATA SUMMARY TABLE-HYBRID MAIN LINE NB

	DESIGN SPEED (V) (MPH)	RADIUS (R) (FT)	ACTUAL SUPERELEVATION (Ea) (IN)	UNBALANCED SUPERELEVATION (Eu) (IN)	SPIRAL LENGTH (Ls) (FT)	BEGIN STATION	END STATION	BEGIN DRAWING
HYBRID102	250	28016.5	6.00	2.93	2000	2106+50.94	2169+66.78	T1115-A
HYBRID103	250	28016.5	6.00	2.93	2000	2580+25.80	2414+74.09	T1118-A
HYBRID104	250	28000	6.00	2.93	2000	2458+24.68	2566+63.96	T1121-A
HYBRID105	250	28000	6.00	2.93	2000	2599+58.87	2731+68.17	T1121-A

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY A. SHIELDS
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

HYBRID ALIGNMENT

TRACK GEOMETRY DATA  
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. T0150-A
SCALE NO SCALE
SHEET NO. ### OF ###



2/16/2012 9:28:37 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\WF-T-3000-A.dgn shieldsa

ALTERNATIVE HYBRID AVENUE 24			
ALIGNMENT	BEGIN STATION	END STATION	SECTION
HYBRID 24	892+90	926+80	AG2
	926+80	1020+00	WYE1
	1020+00	1185+00	AG2
	1185+00	1230+00	WYE1
	1230+00	1360+00	AG2
	1360+00	1375+00	RF2
	1375+00	1435+00	EL1
	1435+00	1443+00	RF2
	1443+00	2100+00	AG2
	2100+00	2135+00	EL1
	2135+00	2681+00	AG2
	2681+00	2695+00	RF2
	2695+00	2731+50	EL1
	2731+50	2740+55	EL5
HYBRID-FR			
	1713+98	1737+00	EL6
	1737+00	1764+78	EL7
	1764+78	1767+00	EL8
	1767+00	1788+84	RF3
	1788+84	1801+61	AG6

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	A. SHIELDS
DRAWN BY	A. SHIELDS
CHECKED BY	A. BOONE
IN CHARGE	A. BOONE
DATE	02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

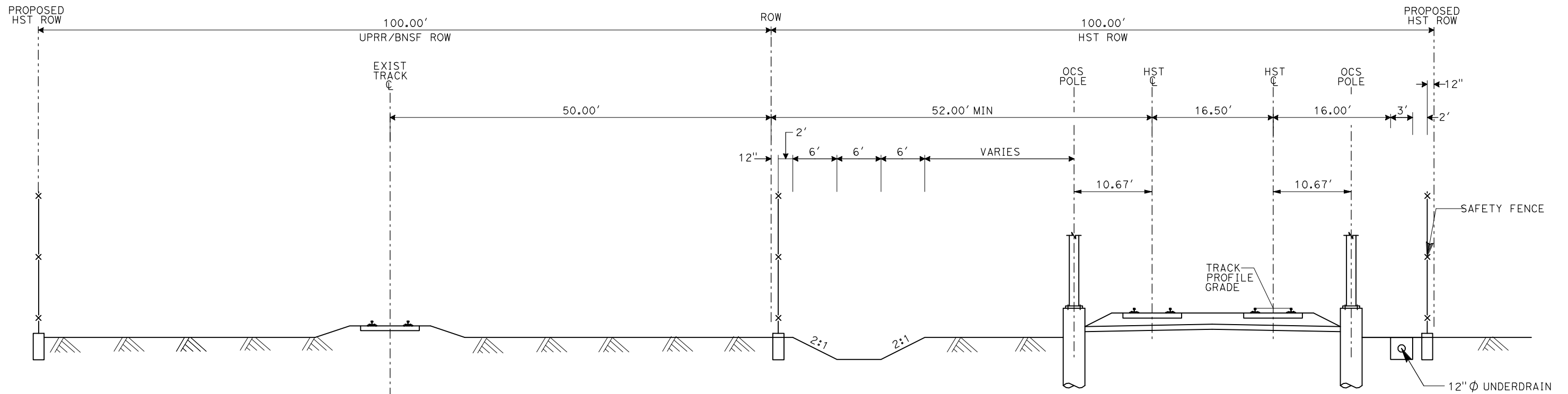
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

GENERAL

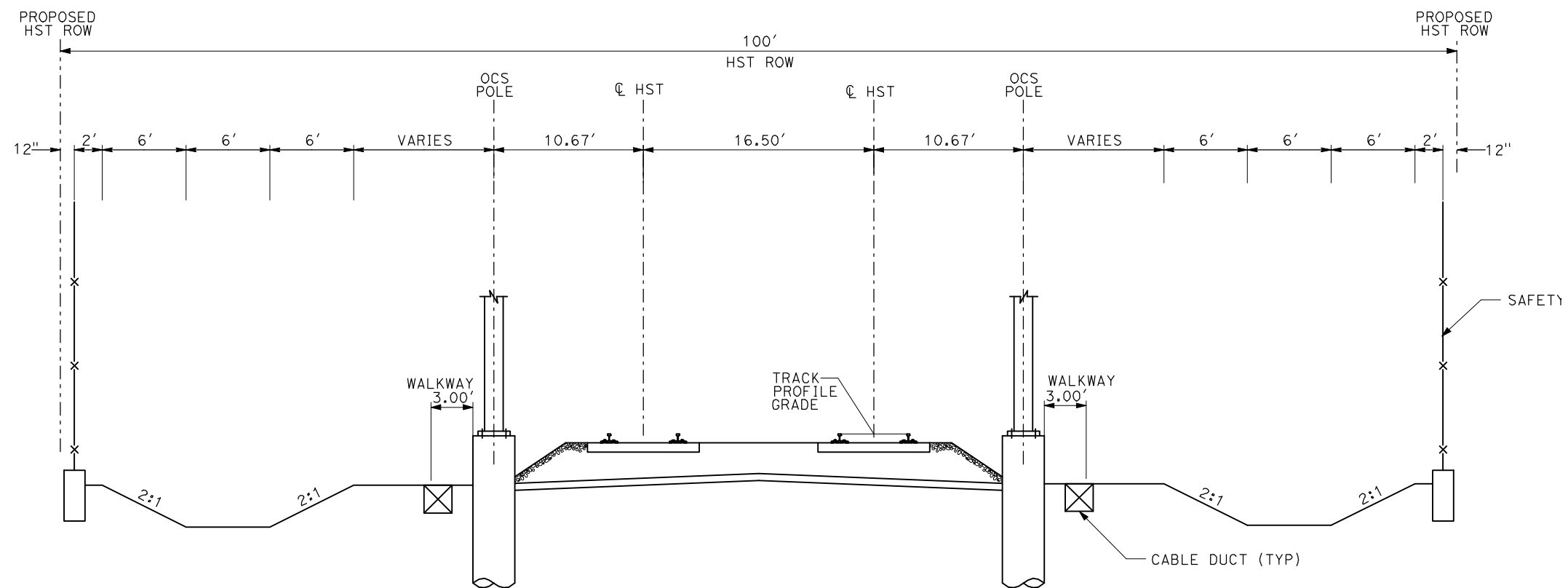
TYPICAL SECTION LIMITS

CONTRACT NO.	HSR06-007
DRAWING NO.	T3000-A
SCALE	NO SCALE
SHEET NO.	### OF ###

4/29/2011 9:23:40 AM I:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\typical sections\MF-T-3001-A.dgn



AG1- DOUBLE TRACK AT GRADE ADJACENT TO UPRR/BNSF



AG2 - DOUBLE TRACK AT GRADE

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



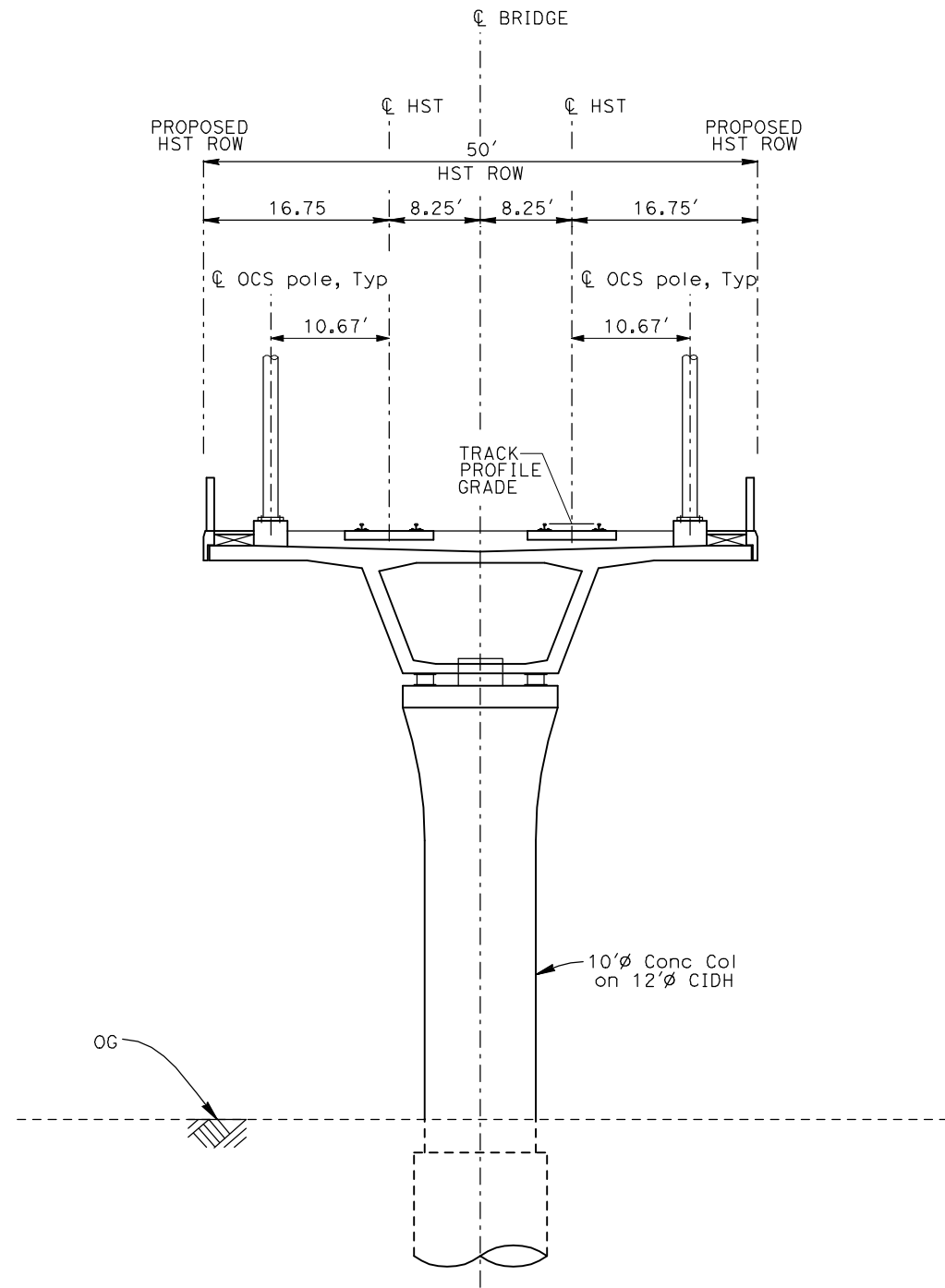
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 1 OF 17

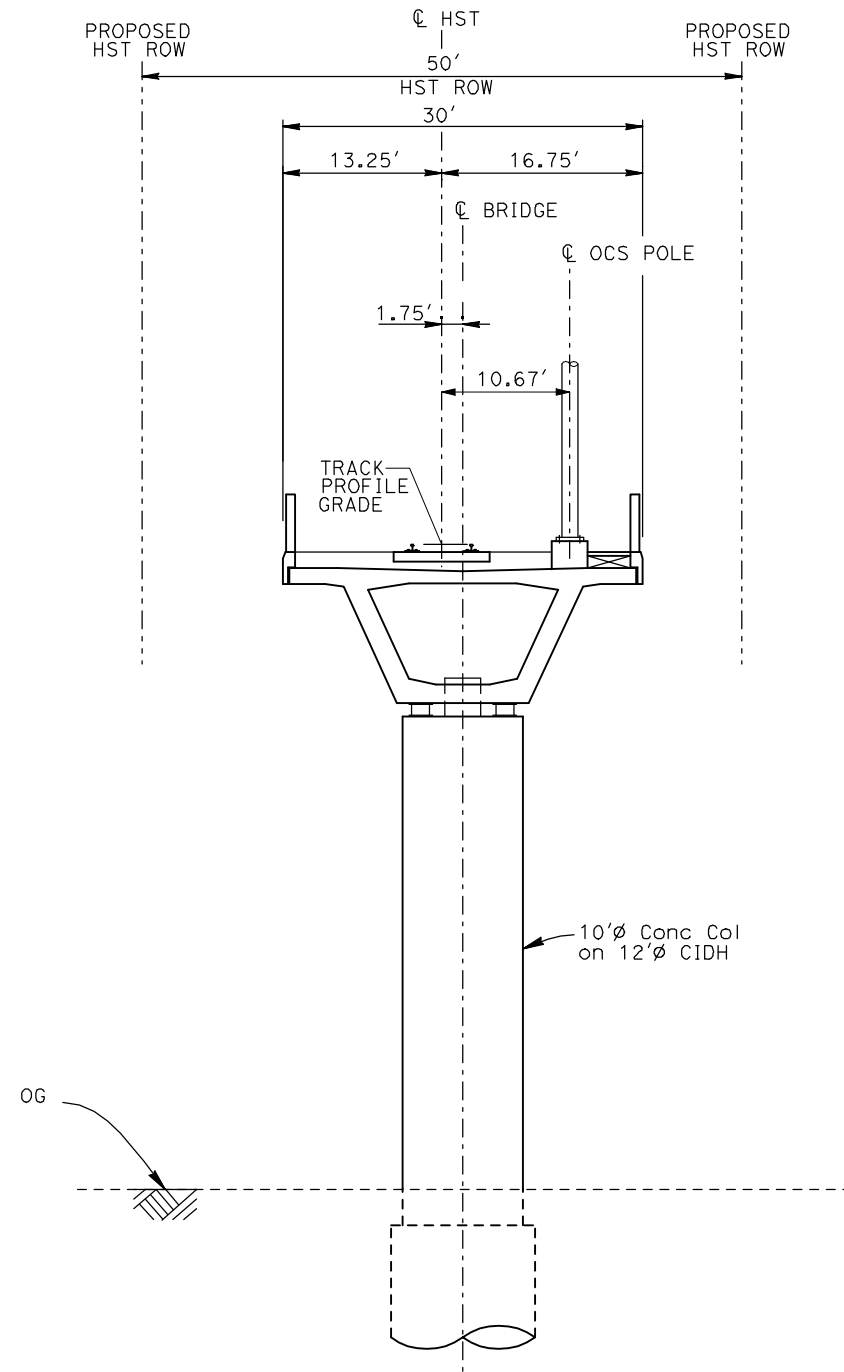
CONTRACT NO.	HSR06-007
DRAWING NO.	T3001-A
SCALE	NO SCALE
SHEET NO.	OF ###



4/29/2011 9:23:53 AM I:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\typical sections\WF-T-3004-A.dgn



EL1 - DOUBLE TRACK ELEVATED



EL2 - SINGLE TRACK ELEVATED

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
  2. BACK-TO-BACK CANTILEVERS ON A SINGLE POLE MAY BE PERMITTED AT PASSENGER STATIONS.
  3. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

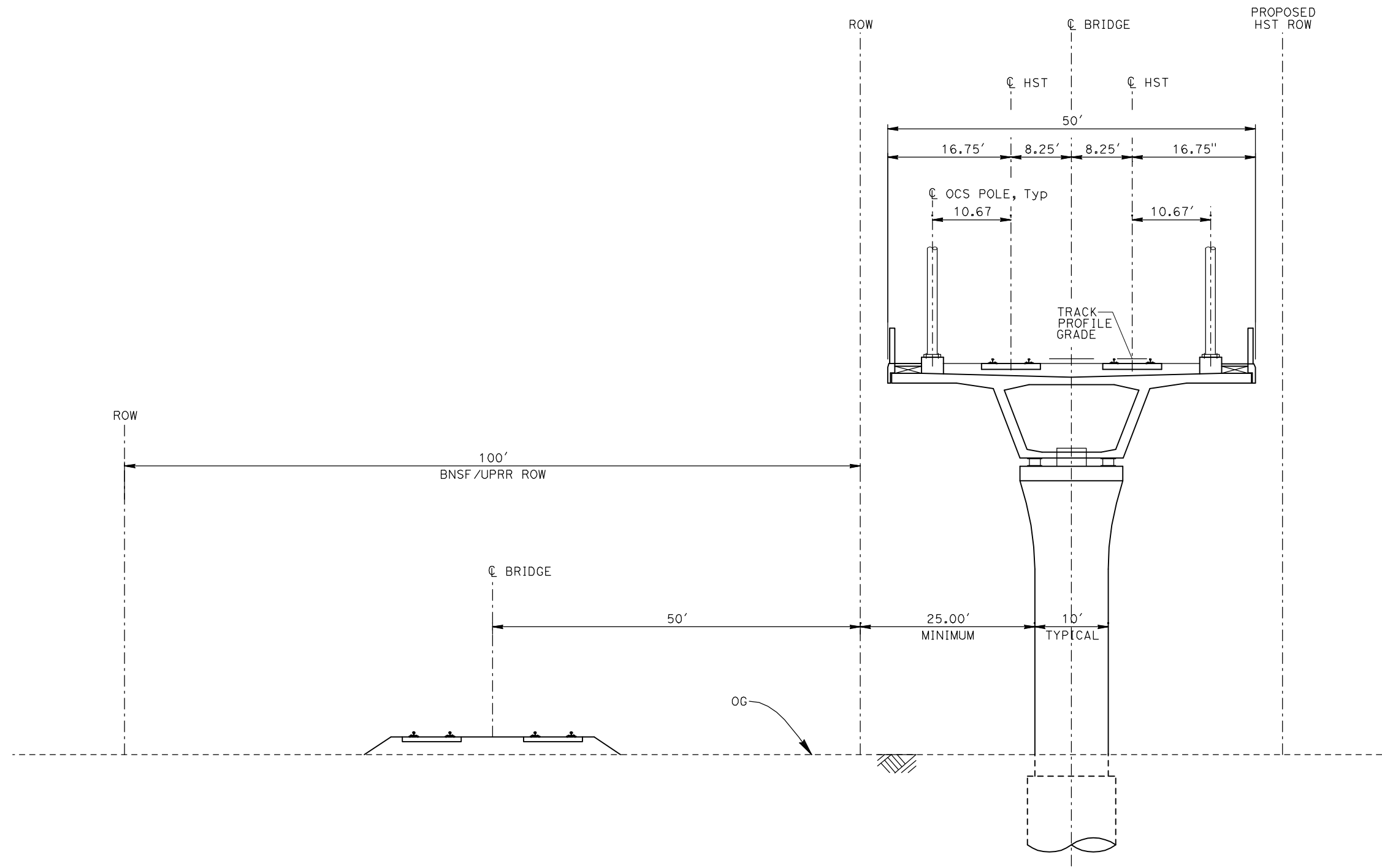


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 4 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3004-A
SCALE NO SCALE
SHEET NO. OF ###

4/29/2011 9:23:57 AM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\typical sections\MF-T-3005-A.dgn  
ShieldsA



EL3 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR/BNSF

- NOTES:
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
  2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
C. VALADAO  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

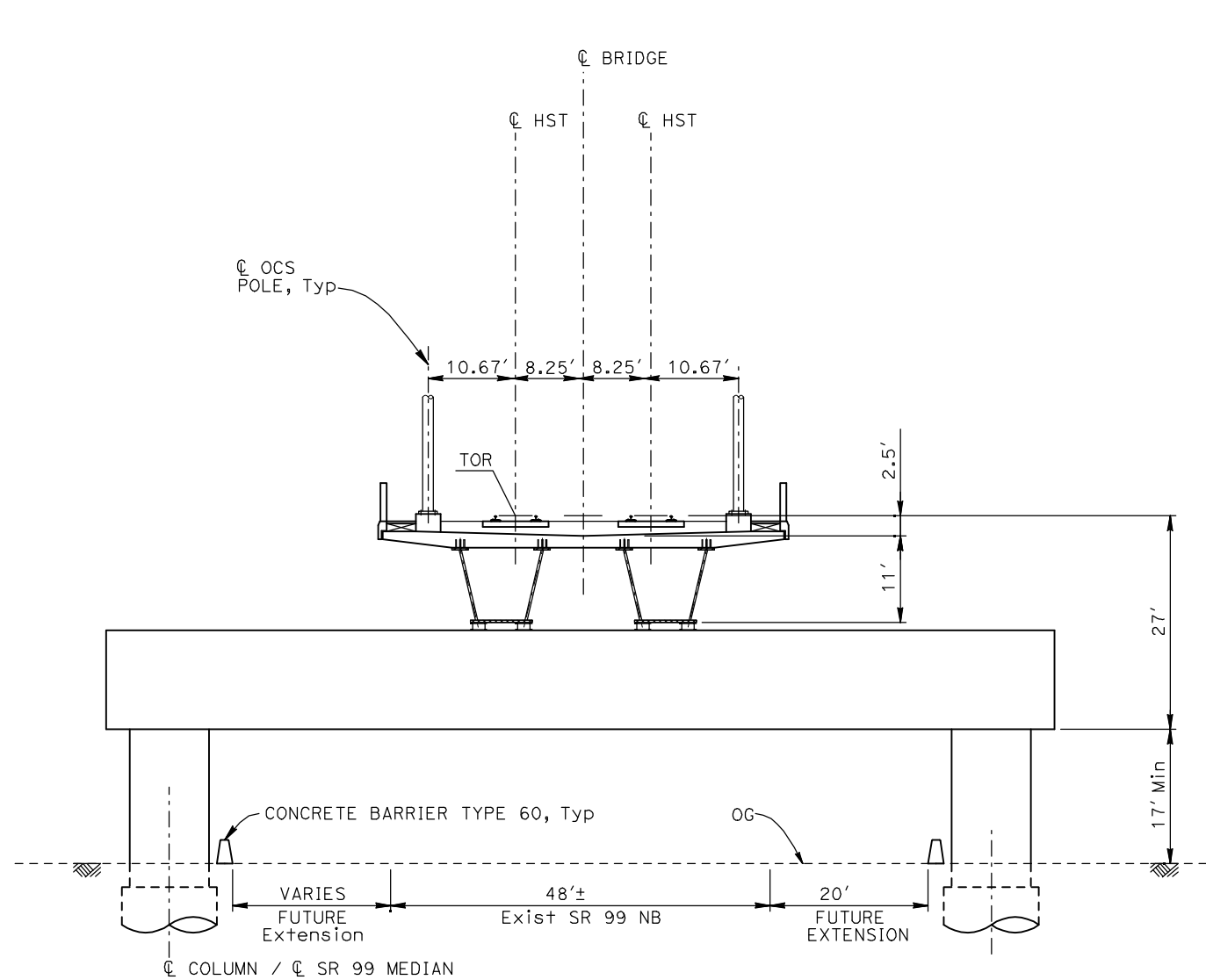
TYPICAL SECTIONS  
SHEET 5 OF 17

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T3005-A  
SCALE  
NO SCALE  
SHEET NO.  
OF ###

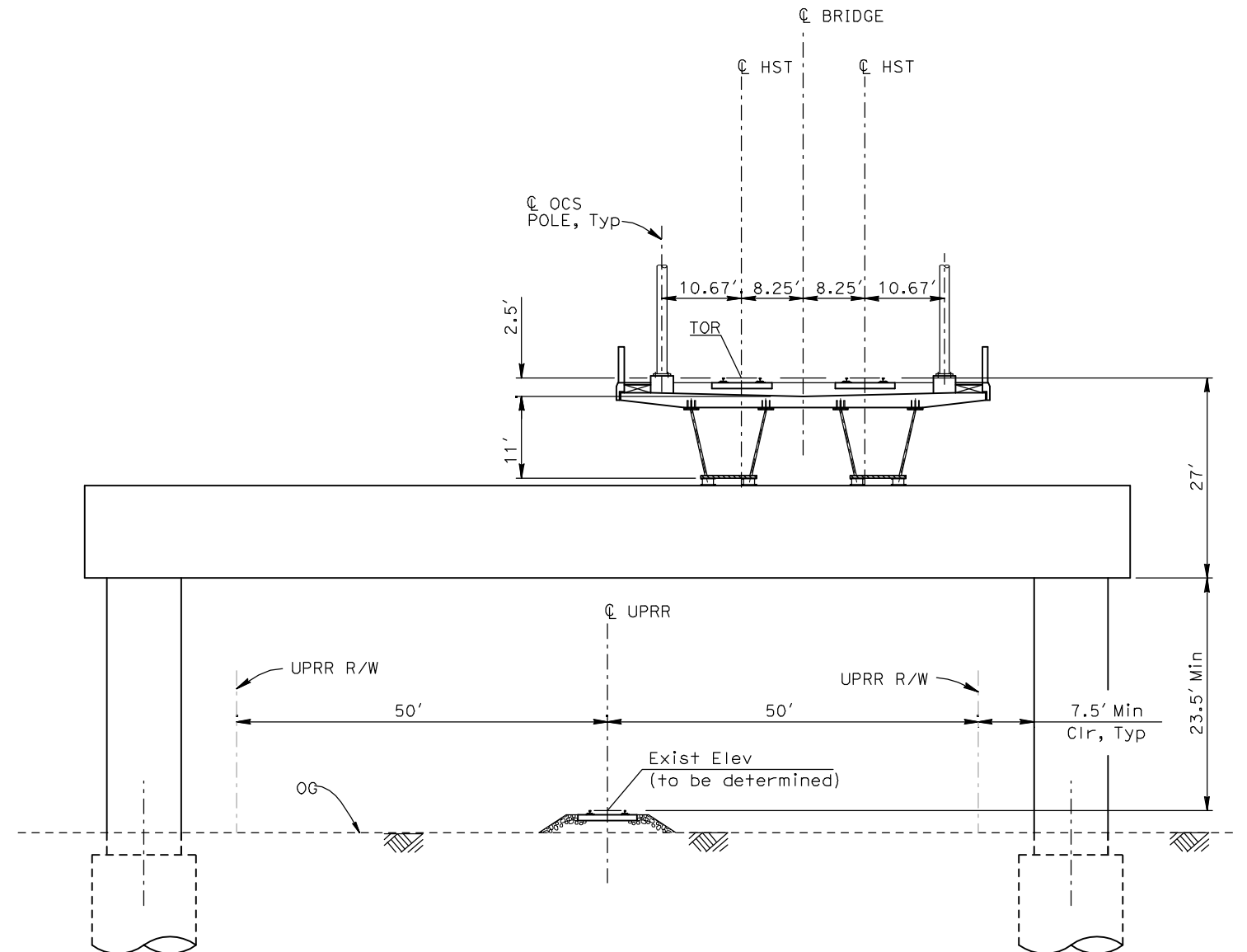


4/29/2011 9:24:01 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\typical sections\WF-T-3006-A.dgn

ShieldsA



EL4 - DOUBLE TRACK ELEVATED CROSSING SR99



EL5 - DOUBLE TRACK ELEVATED CROSSING UPRR/BNSF

NOTES:

1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

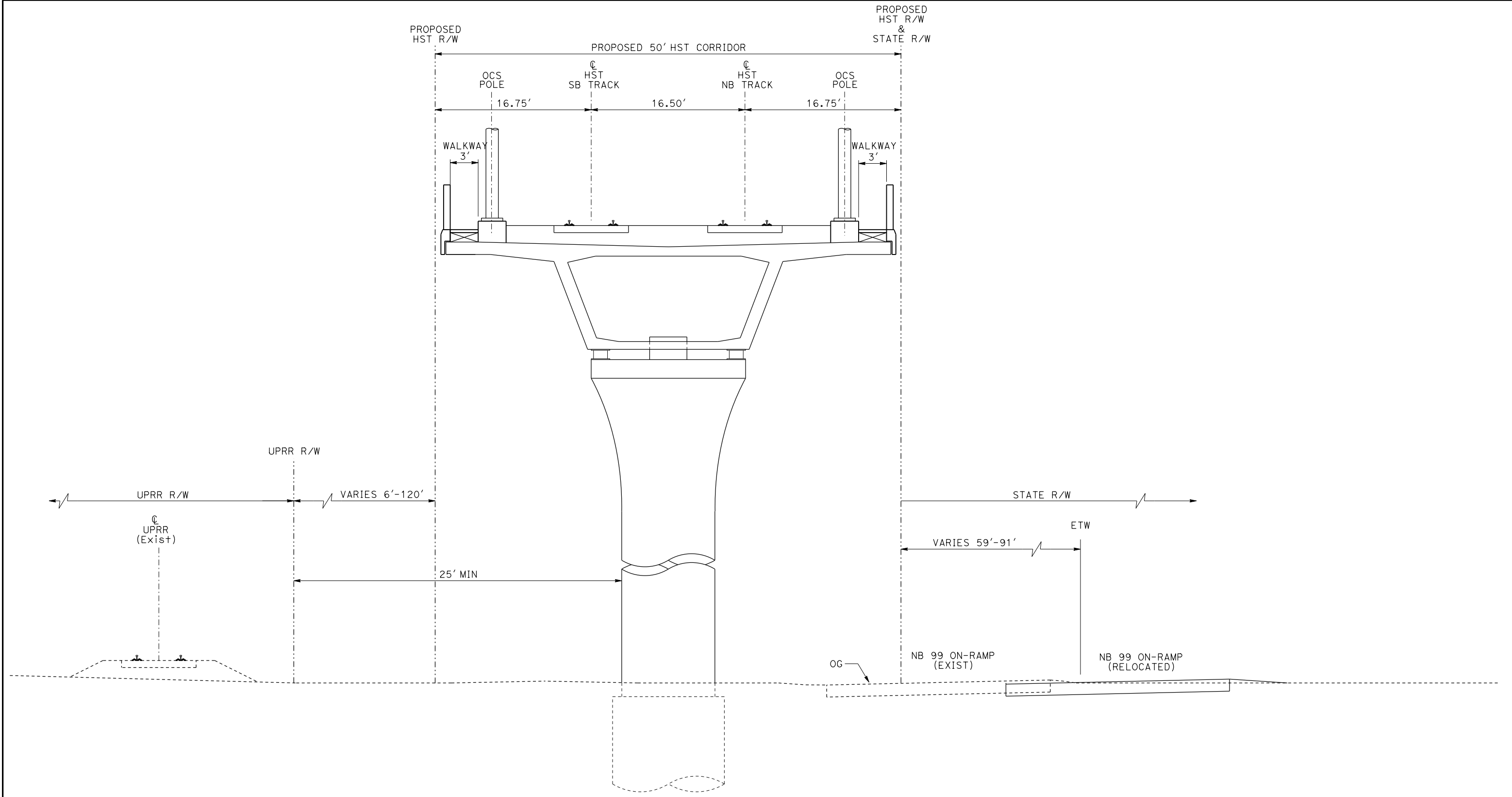


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

TYPICAL SECTIONS  
SHEET 6 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3006-A
SCALE NO SCALE
SHEET NO. OF ###



EL6 - DOUBLE TRACK ELEVATED ADJACENT TO UPRR

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

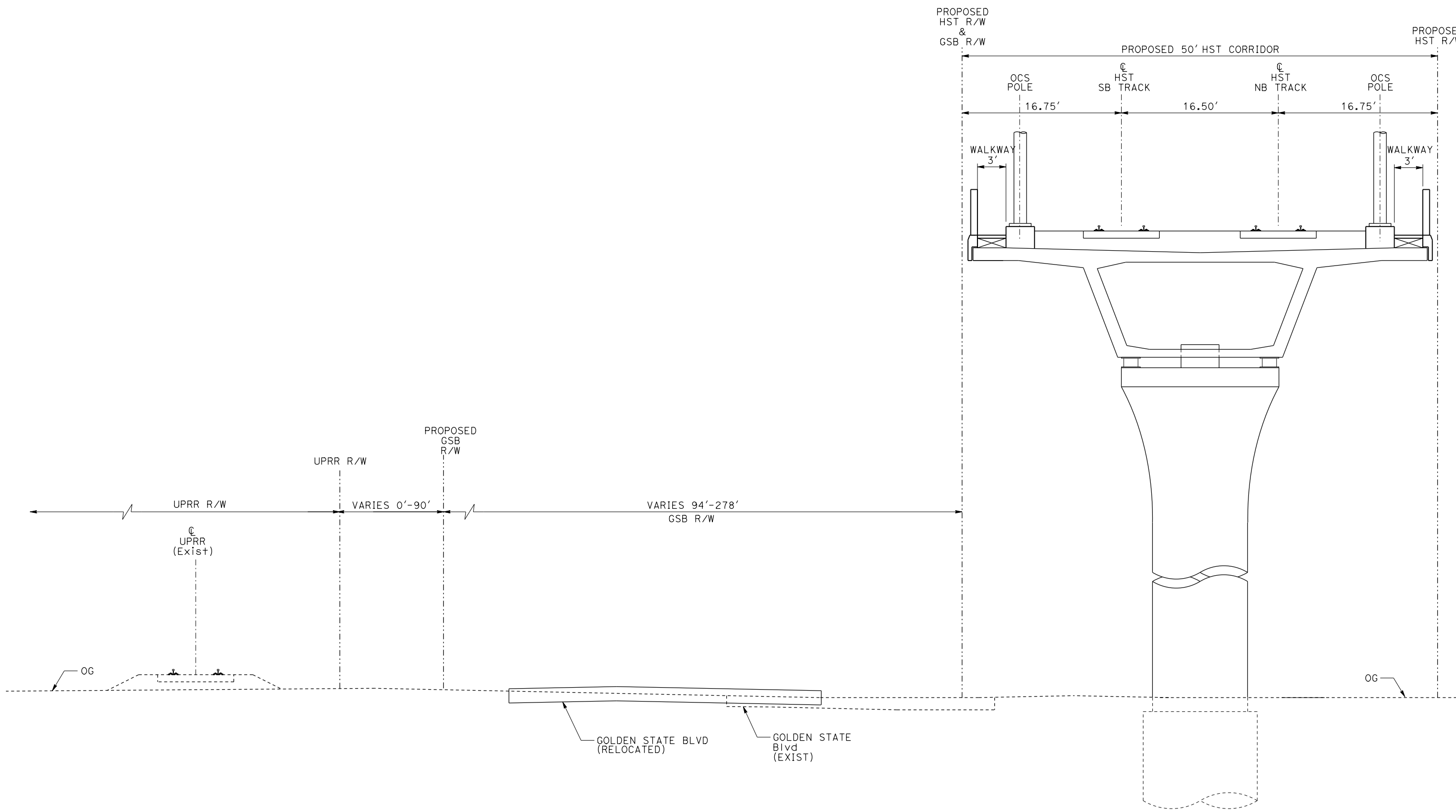
**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTIONS  
SHEET 9 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3009-A
SCALE NO SCALE
SHEET NO.



EL7 - DOUBLE TRACK ELEVATED ADJACENT TO GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

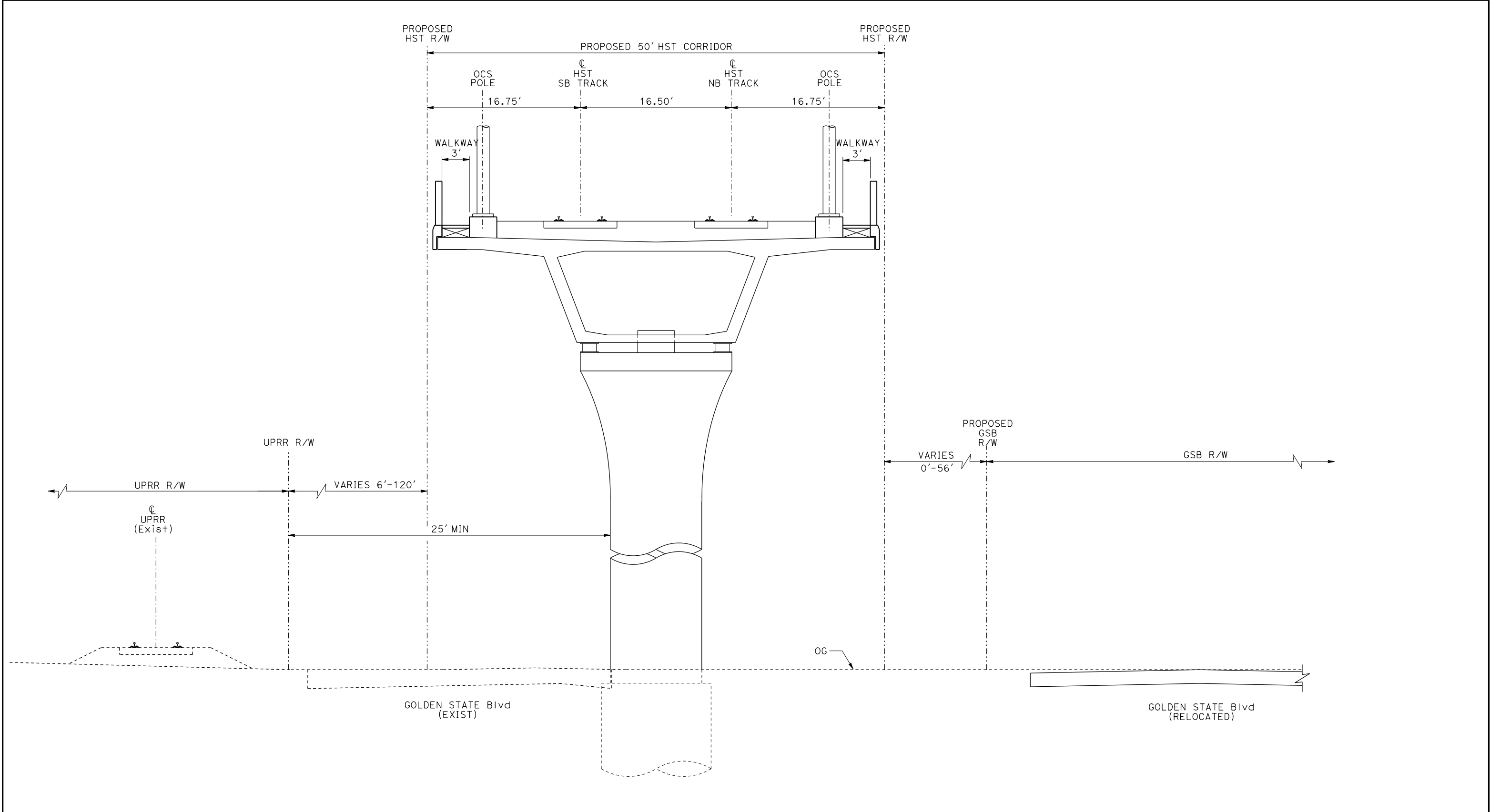


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

TYPICAL SECTIONS  
SHEET 10 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3010-A
SCALE NO SCALE
SHEET NO.



EL8 - DOUBLE TRACK ELEVATED BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

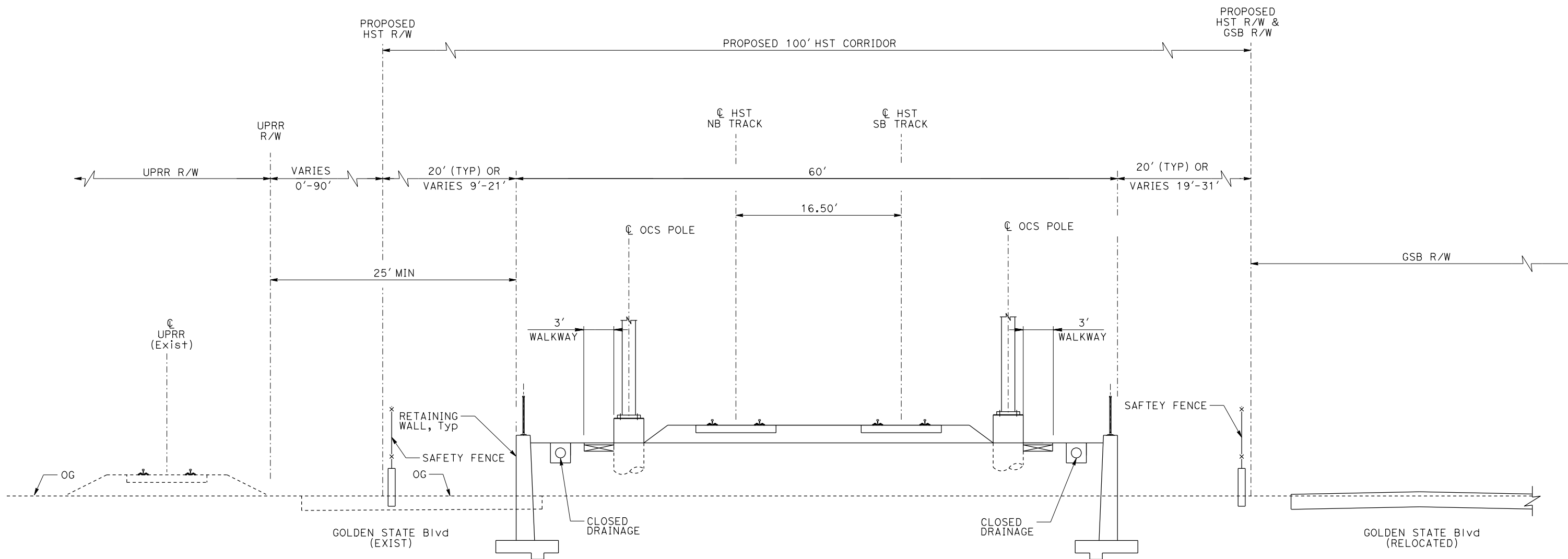
RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

TYPICAL SECTIONS  
SHEET 11 OF 17

CONTRACT NO. HSR06-007
DRAWING NO. T3011-A
SCALE NO SCALE
SHEET NO.



RF3 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
L. PROCTOR  
DRAWN BY  
S. LEONG  
CHECKED BY  
V. CHIO  
IN CHARGE  
J. VALSECCHI  
DATE  
MAY 2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

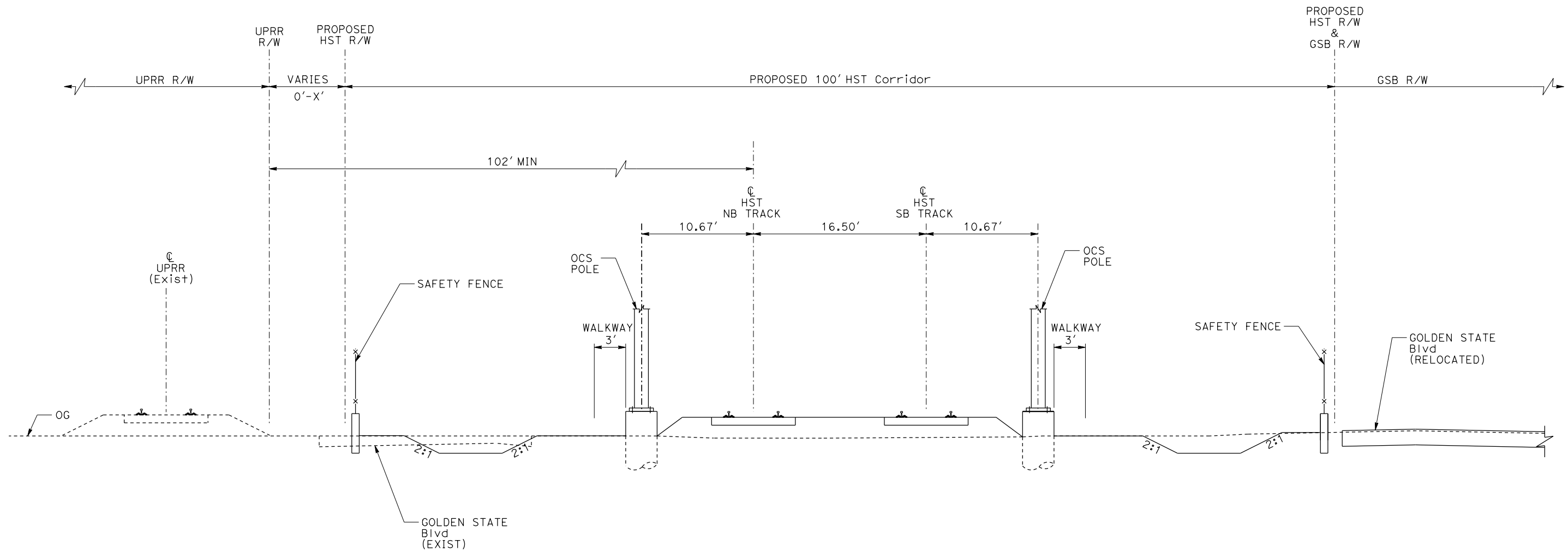
TYPICAL SECTION  
SHEET 12 OF 17

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T3012-A  
SCALE  
NO SCALE  
SHEET NO.

USERNAME => lproctor

DATE PLOTTED => 28-APR-2011





AG6 - DOUBLE TRACK BETWEEN UPRR AND GOLDEN STATE BOULEVARD

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

TYPICAL SECTION  
SHEET 13 OF 17

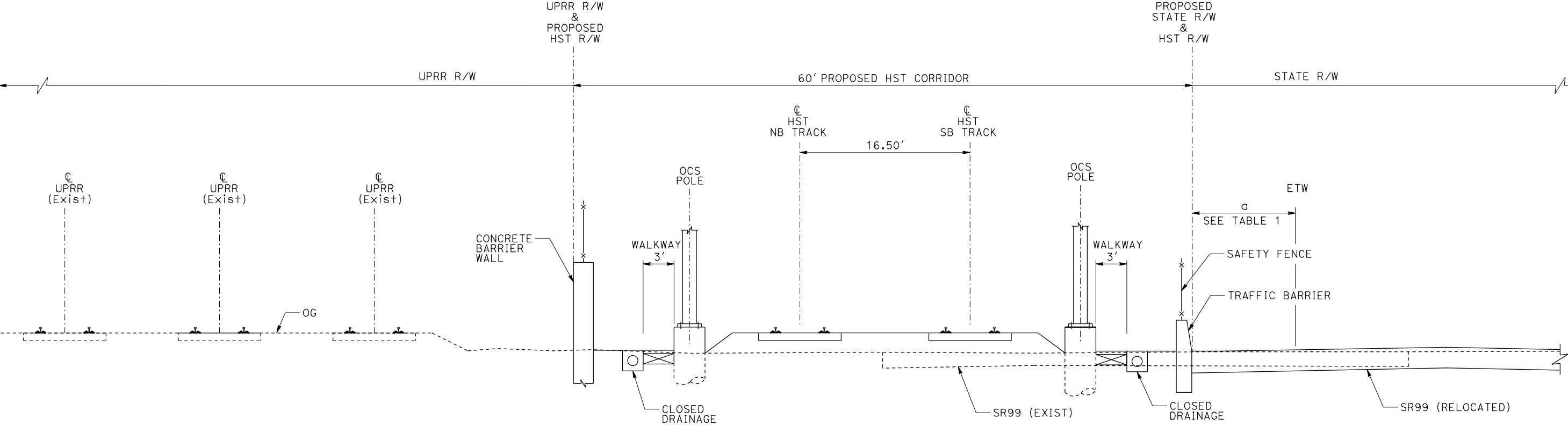
CONTRACT NO. HSR06-007
DRAWING NO. T3013-A
SCALE NO SCALE
SHEET NO.

USERNAME => lproctor

DATE PLOTTED => 28-APR-2011

TABLE 1

a > 30'	NO TRAFFIC BARRIER
4' < a < 30'	TRAFFIC BARRIER



AG7 - DOUBLE TRACK BETWEEN UPRR AND STATE ROUTE 99

"SEE T3000-T3014 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY L. PROCTOR
DRAWN BY S. LEONG
CHECKED BY V. CHIO
IN CHARGE J. VALSECCHI
DATE MAY 2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION



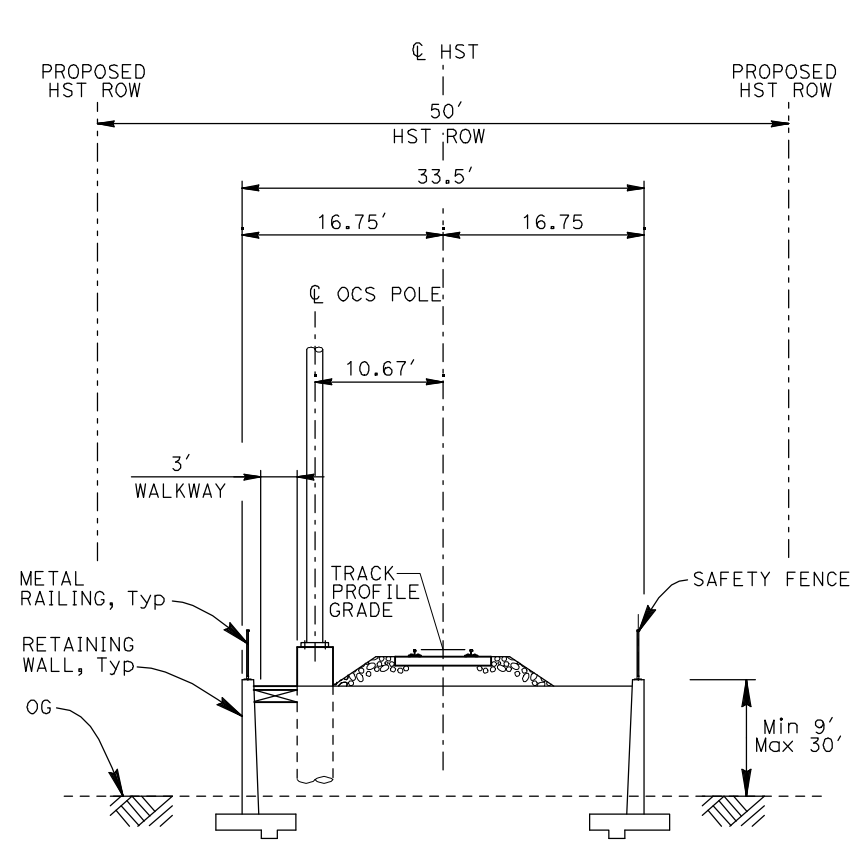
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

TYPICAL SECTION  
SHEET 14 OF 17

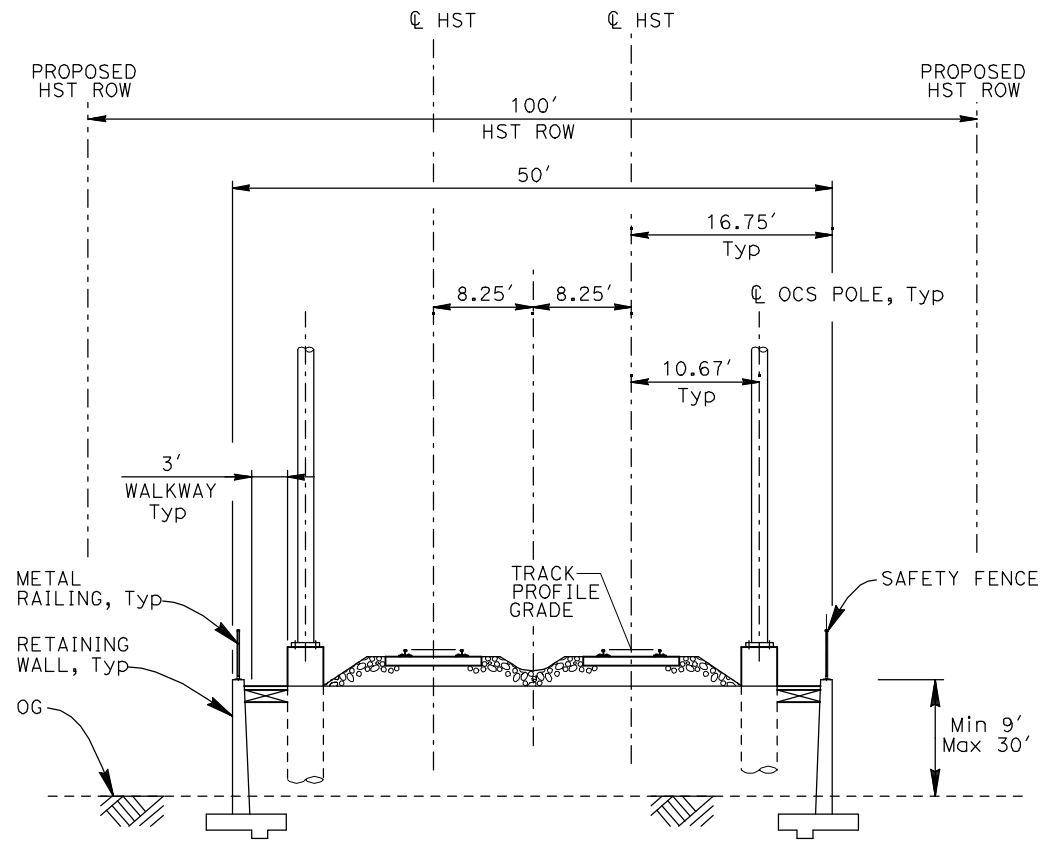
CONTRACT NO. HSR06-007
DRAWING NO. T3014-A
SCALE NO SCALE
SHEET NO.

4/29/2011 9:32:33 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\typical sections\WF-T-3017-A.dgn

ShieldsA



RF1 - SINGLE TRACK RETAINED FILL



RF2 - DOUBLE TRACK RETAINED FILL

NOTES:

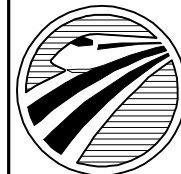
1. TRACK, OCS POLES AND FOUNDATIONS, CABLE DUCTS AND DRAINAGE ARE SCHEMATIC AND DO NOT REPRESENT DESIGN.
2. RIGHT-OF-WAY REQUIRED FOR THE HIGH-SPEED RAIL GUIDEWAY WILL DEPEND UPON CONDITIONS ALONG THE ALIGNMENT, INCLUDING TERRAIN, WHERE CUT/FILL SLOPES, RETAINING STRUCTURES, AND ACCESS ARE REQUIRED.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY C. VALADAO
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

TYPICAL SECTIONS  
SHEET 17 OF 17

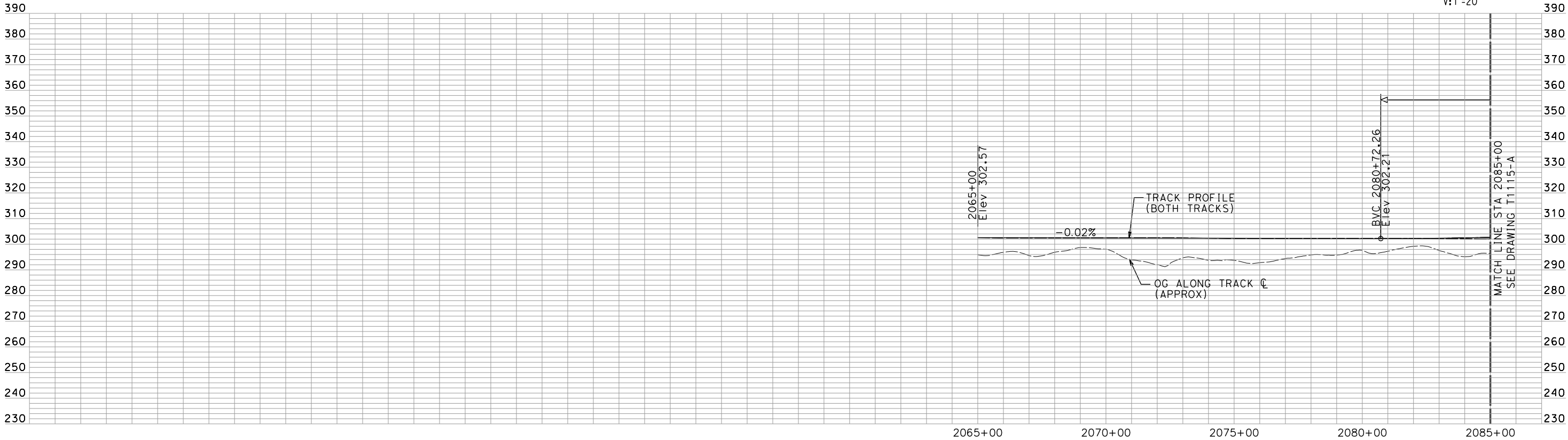
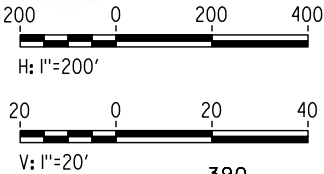
CONTRACT NO. HSR06-007
DRAWING NO. T3017-A
SCALE NO SCALE
SHEET NO. OF ###

3/8/2012 10:58:10 AM \\usscr1fp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\ELECTRONIC SUBMITTAL 3-1-2012\TRACK - Opt  
shieldsa



NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 07/27/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

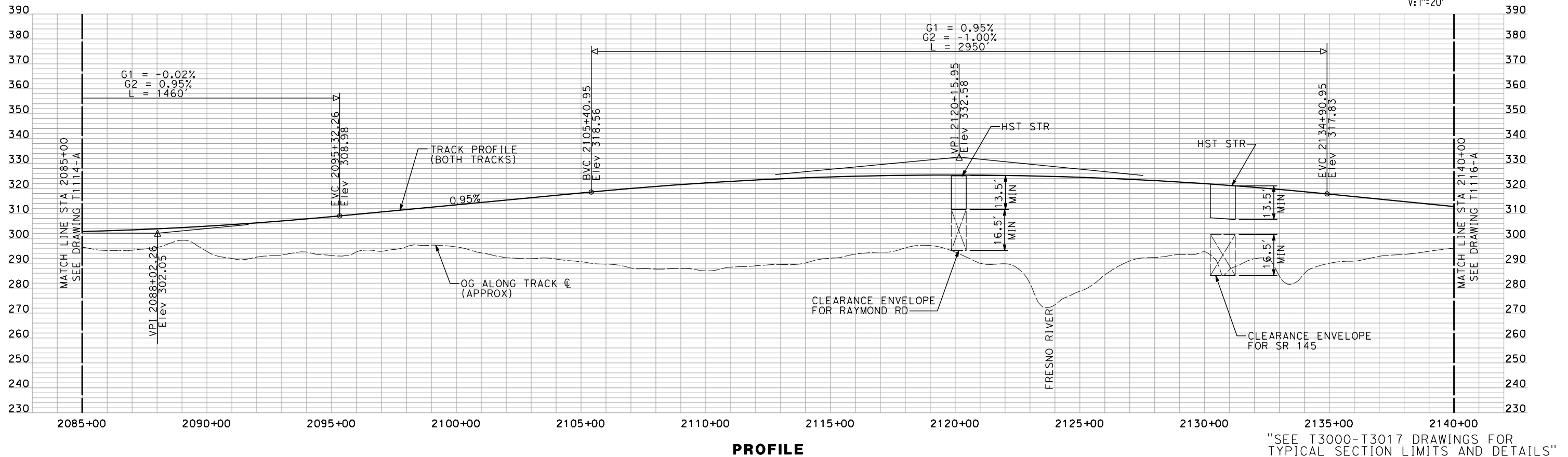
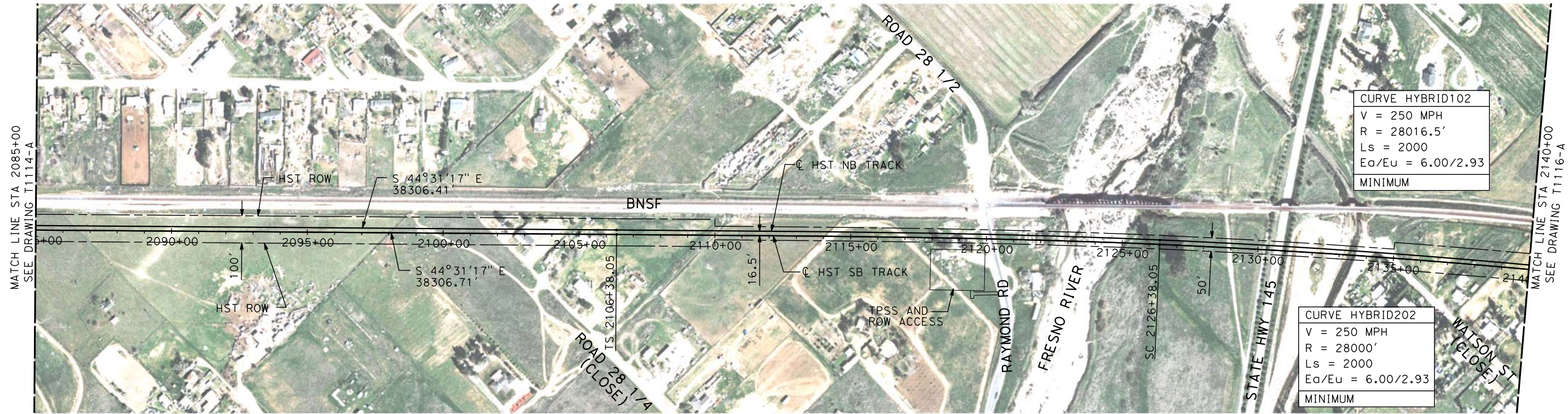
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID

PLAN AND PROFILE  
STA 2030+00 TO STA 2085+00

CONTRACT NO. HSR06-007
DRAWING NO. T1114-A
SCALE AS SHOWN
SHEET NO. ### OF ###



2/16/2012 7:56:58 AM \\usscri1fp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\WF-T-1115-A.dgn shieldsa



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

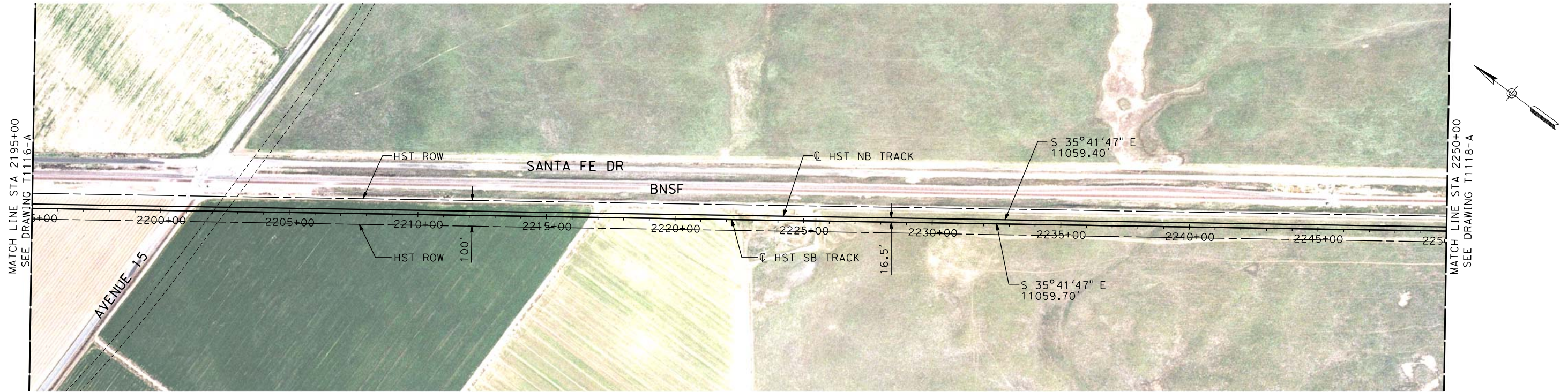


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
HYBRID  
PLAN AND PROFILE  
STA 2085+00 TO STA 2140+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1115-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

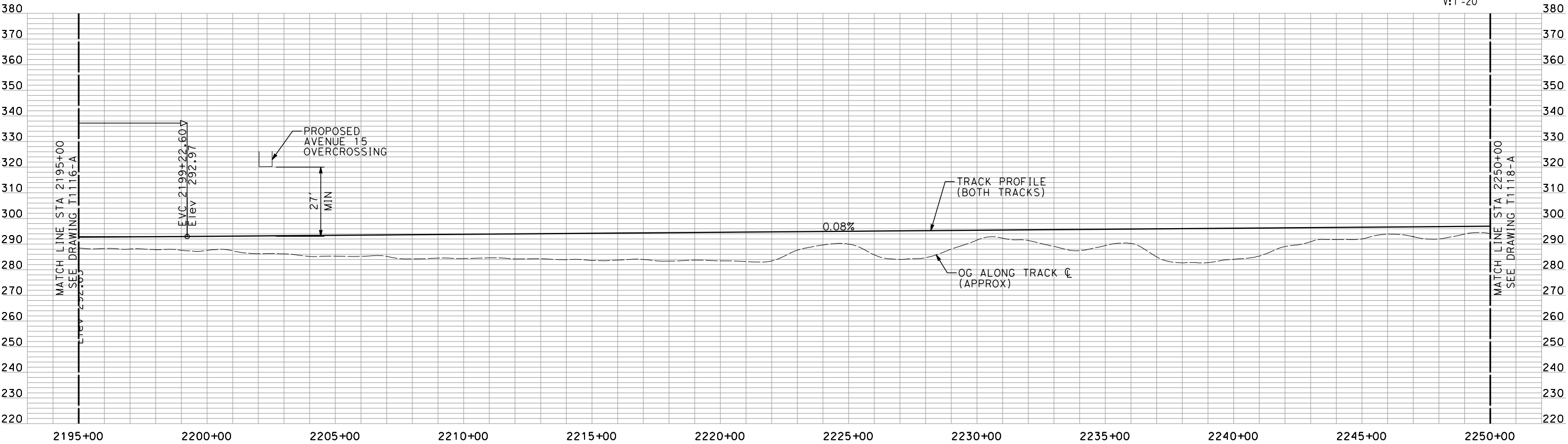
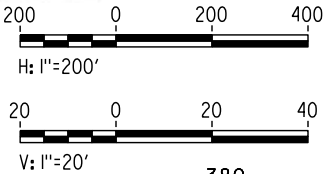


2/16/2012 8:01:26 AM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\MF-T-1117-A.dgn shieldsa



PLAN

NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

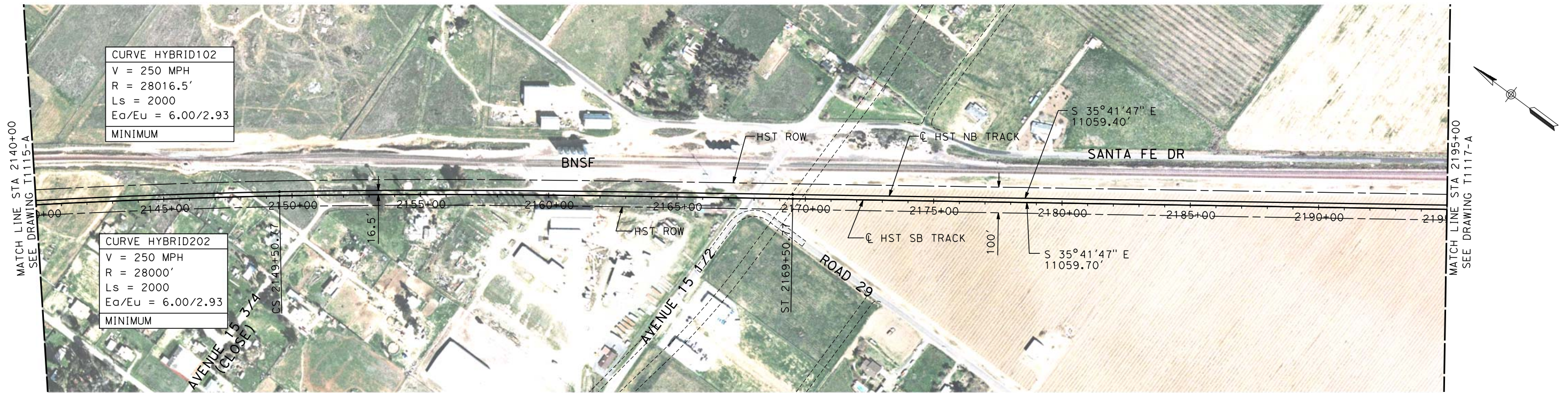
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2195+00 TO STA 2250+00

CONTRACT NO. HSR06-007
DRAWING NO. T1117-A
SCALE AS SHOWN
SHEET NO. ### OF ###

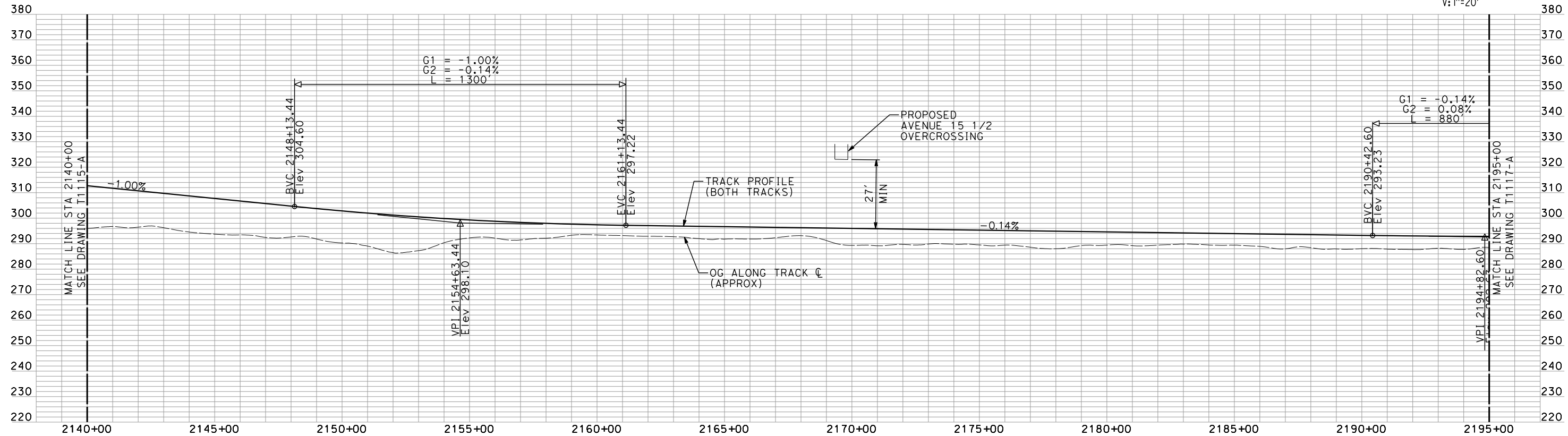
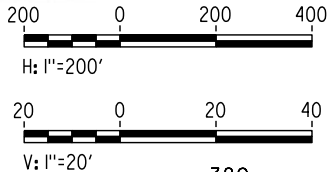


2/16/2012 10:10:25 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\MF-T-1116-A.dgn  
shieldsa



PLAN

NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



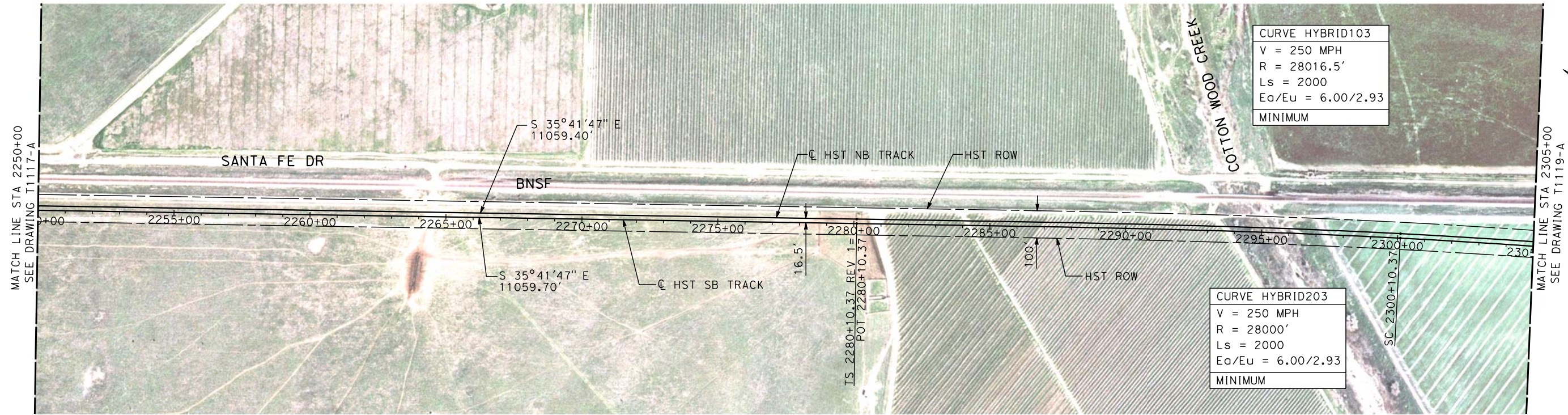
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2140+00 TO STA 2195+00

CONTRACT NO. HSR06-007
DRAWING NO. T1116-A
SCALE AS SHOWN
SHEET NO. ### OF ###

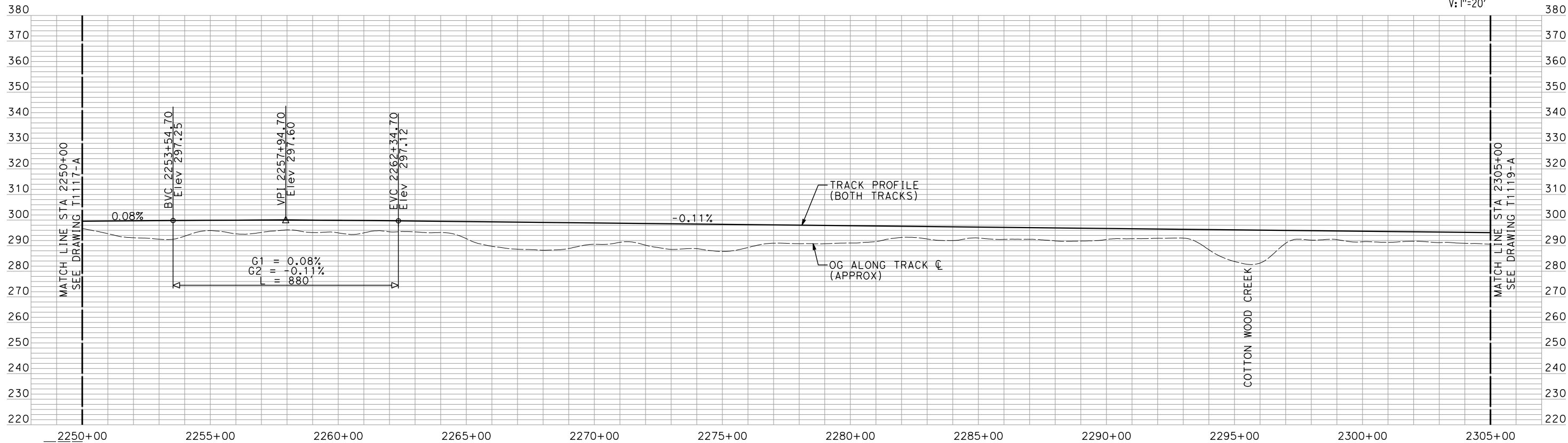
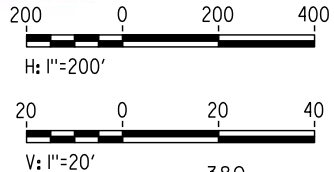


2/16/2012 8:05:17 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\WF-T-1118-A.dgn shieldsa



NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2250+00 TO STA 2305+00

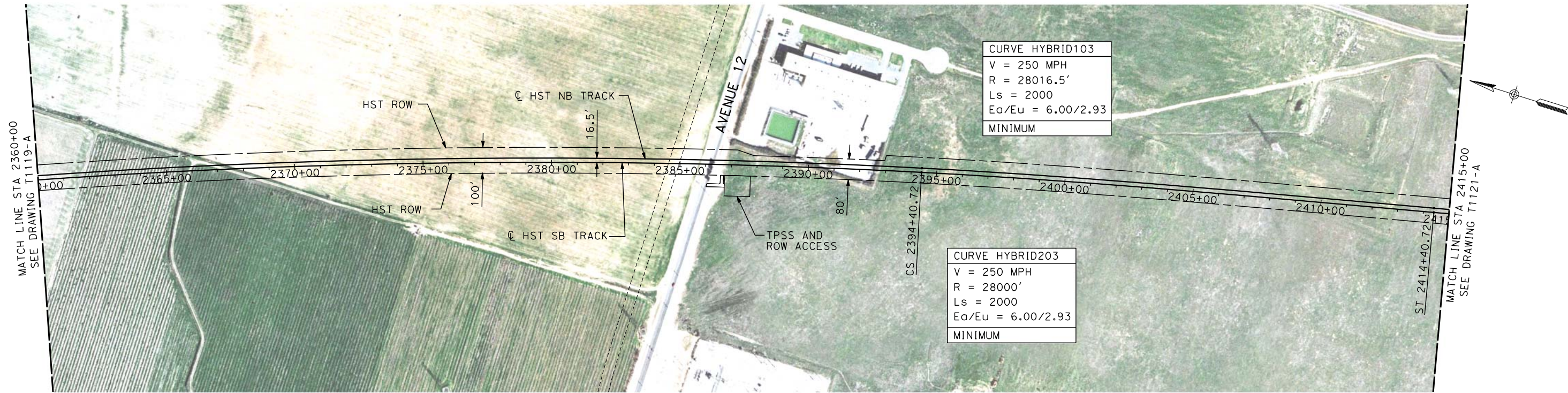
CONTRACT NO. HSR06-007
DRAWING NO. T1118-A
SCALE AS SHOWN
SHEET NO. ### OF ###





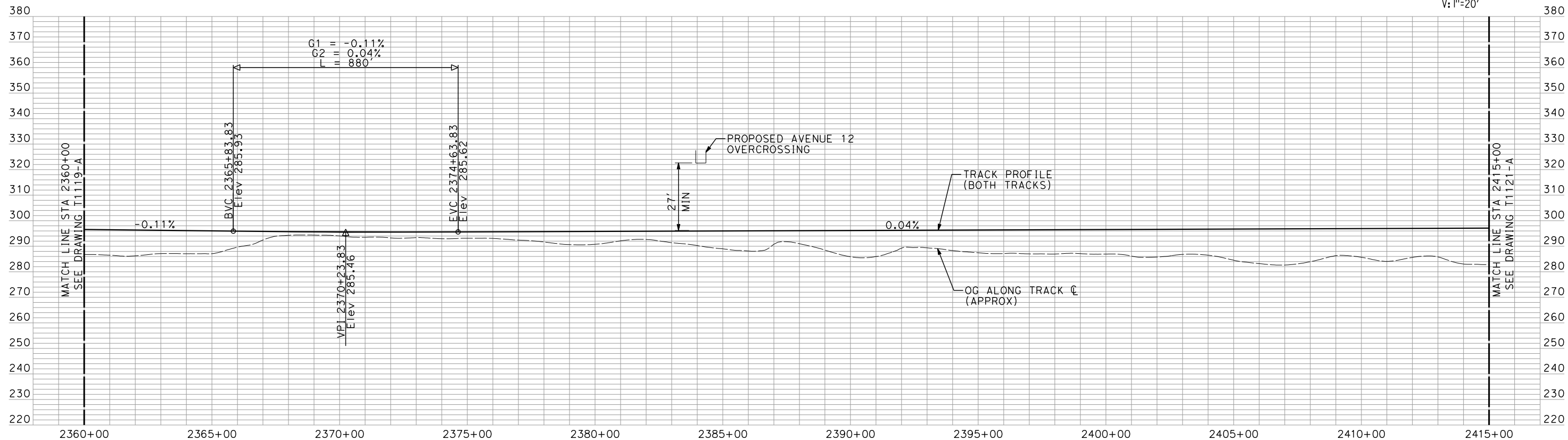
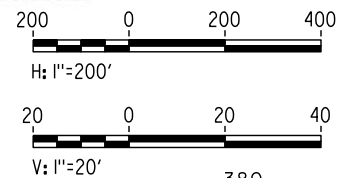


2/16/2012 8:11:09 AM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\WF-T-1120-A.dgn shieldsa



NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



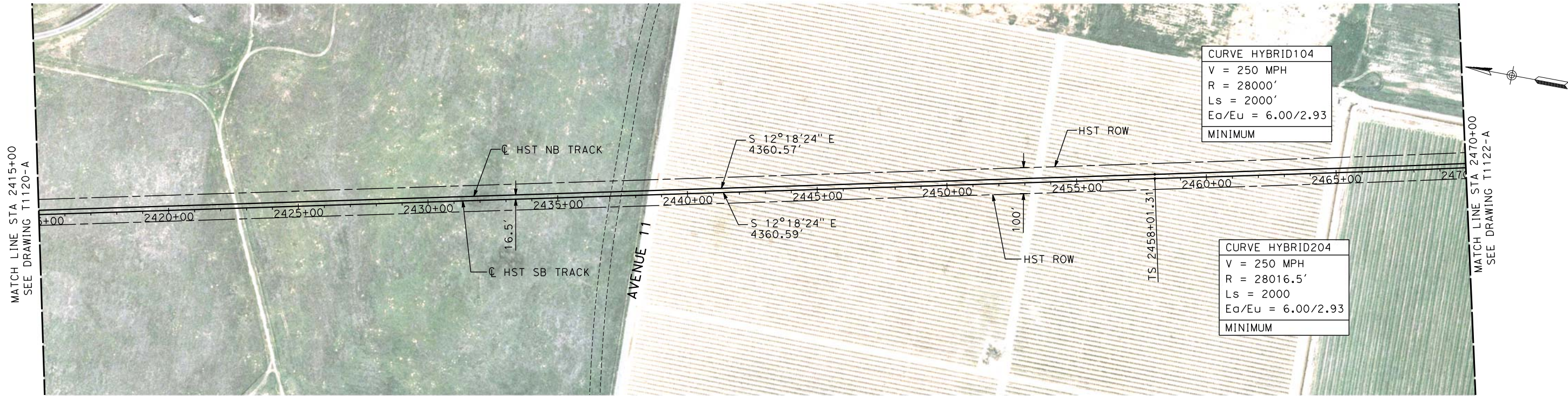
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2360+00 TO STA 2415+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1120-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

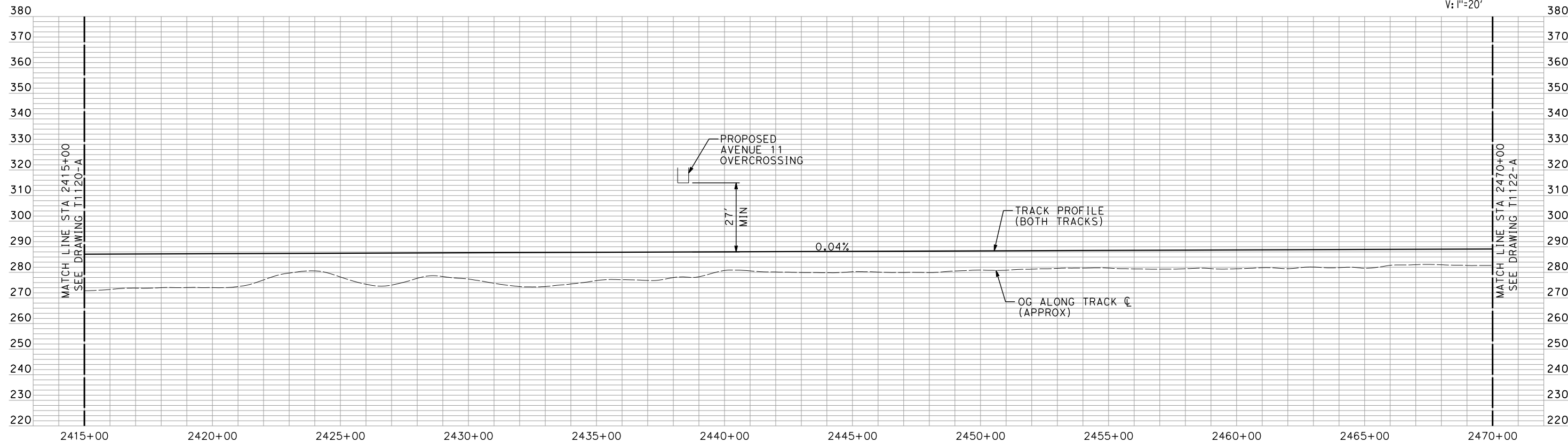
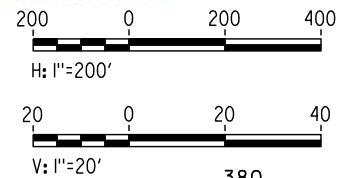


2/16/2012 8:12:36 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\WF-T-1121-A.dgn shieldsa



NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

PLAN



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
A. SHIELDS  
DRAWN BY  
H. SULLIVAN  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



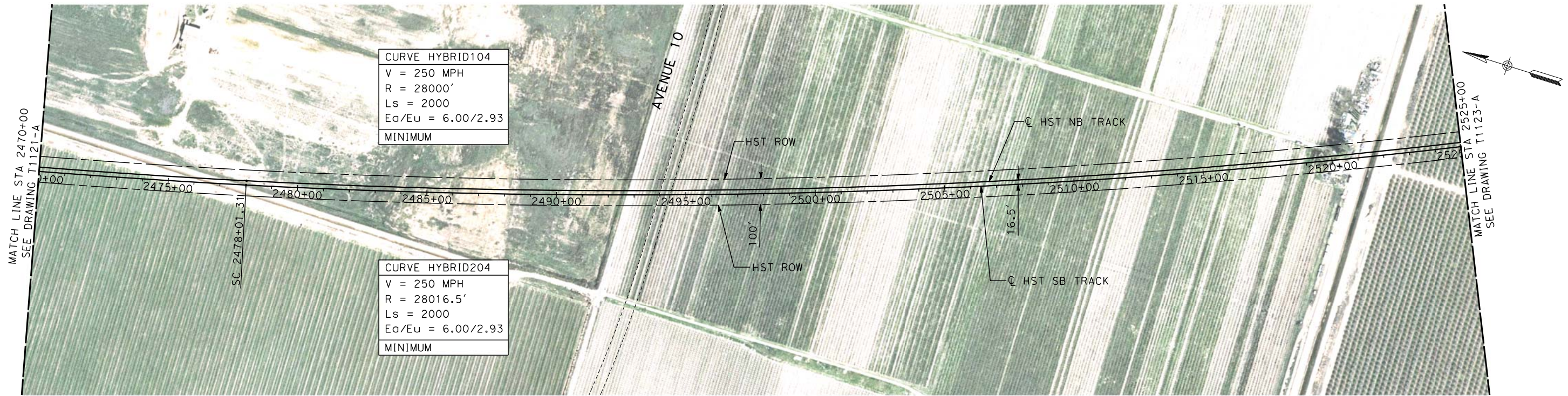
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2415+00 TO STA 2470+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
T1121-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

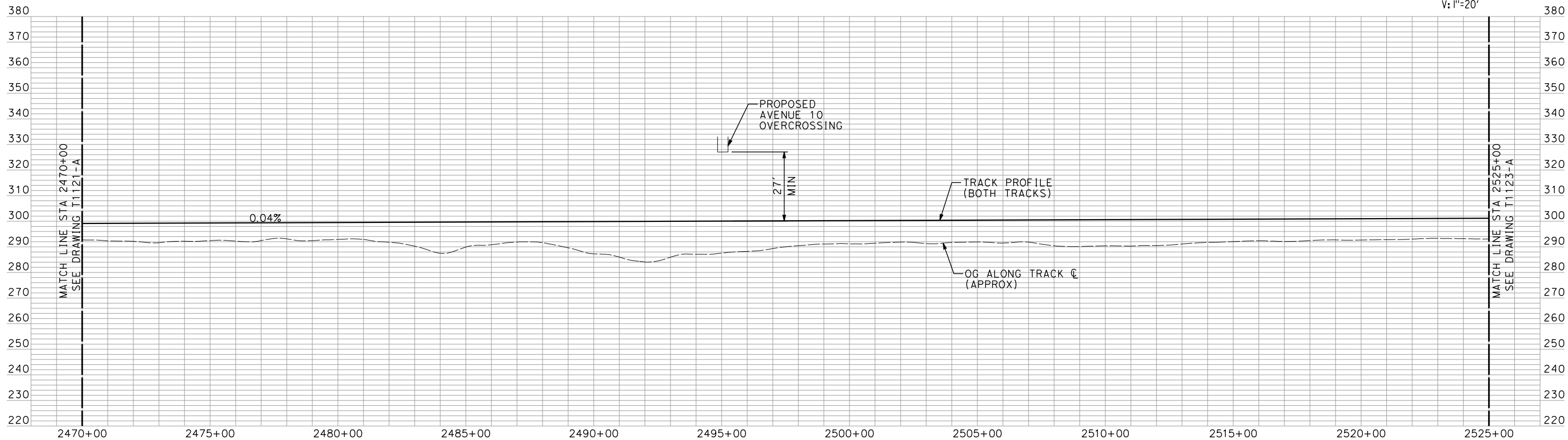
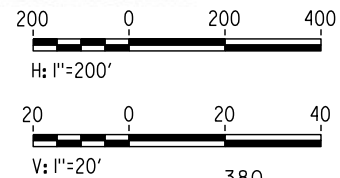


2/16/2012 8:15:52 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\WF-T-1122-A.dgn shieldsa



NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

## PLAN



## PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



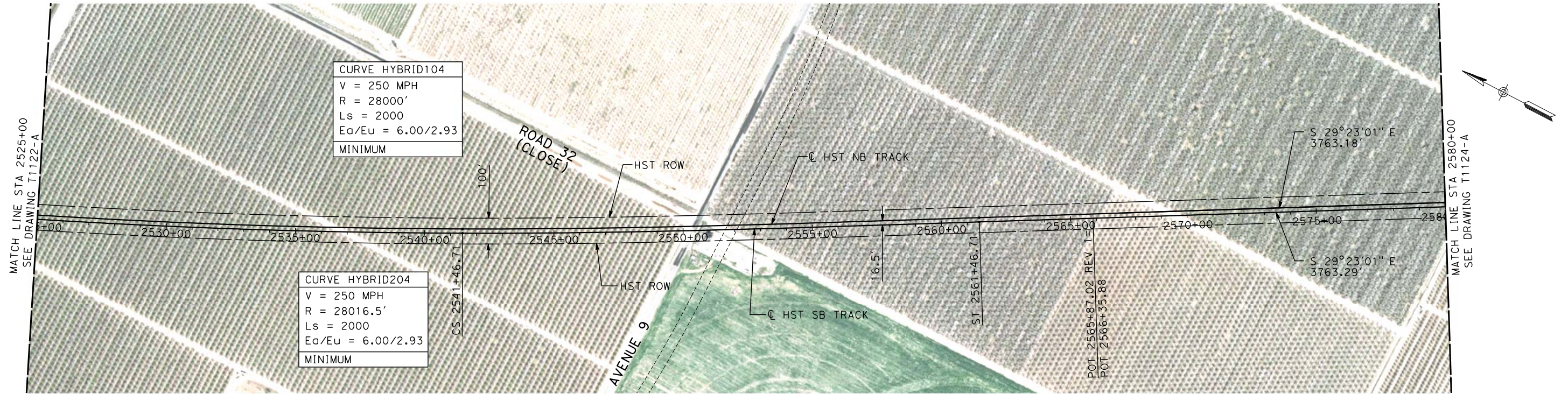
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
HYBRID

PLAN AND PROFILE  
STA 2470+00 TO STA 2525+00

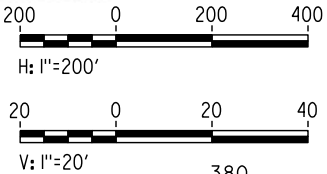
CONTRACT NO. HSR06-007
DRAWING NO. T1122-A
SCALE AS SHOWN
SHEET NO. ### OF ###



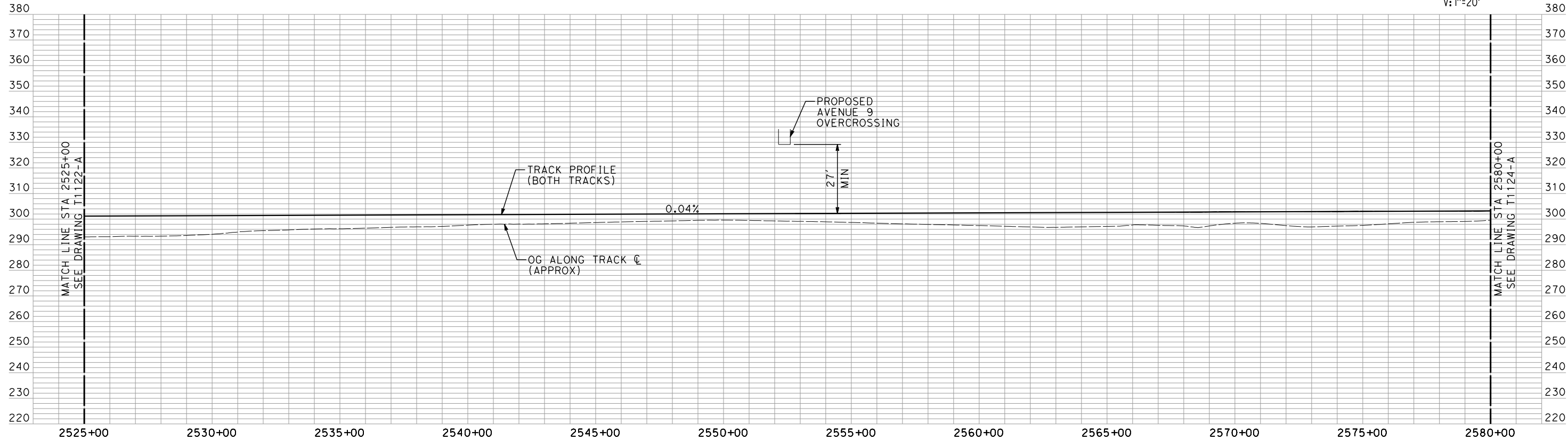
2/16/2012 8:19:20 AM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\MF-T-1123-A.dgn shieldsa



PLAN




NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.

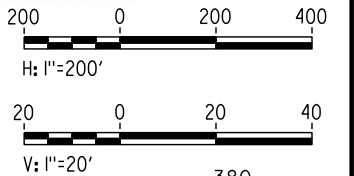


PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

						DESIGNED BY A. SHIELDS	RECORD SET 15% DESIGN SUBMITTAL  NOT FOR CONSTRUCTION	<div><b>AECOM</b> Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811</div> <div><b>CH2MHILL</b></div>	<div><b>CALIFORNIA</b> HIGH-SPEED RAIL AUTHORITY</div>	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO</b>  HYBRID  PLAN AND PROFILE STA 2525+00 TO STA 2580+00	CONTRACT NO. HSR06-007
					DRAWN BY H. SULLIVAN	DRAWING NO. T1123-A					
					CHECKED BY A. BOONE	SCALE AS SHOWN					
					IN CHARGE A. BOONE	SHEET NO. ### OF ###					
					DATE 02/17/2012						
REV	DATE	BY	CHK	APP	DESCRIPTION						



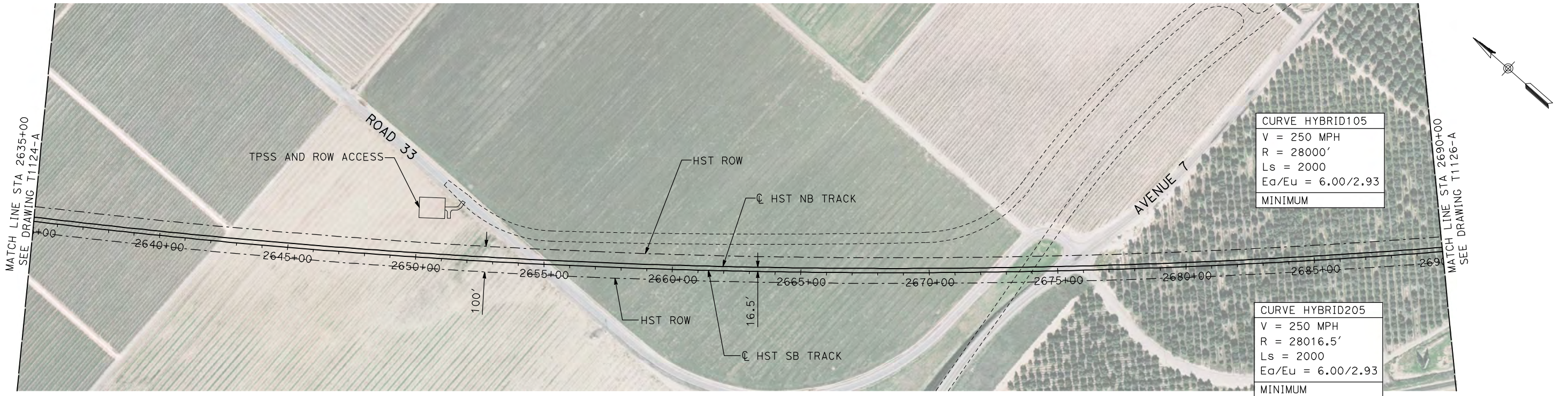


## PLAN

[illegible]

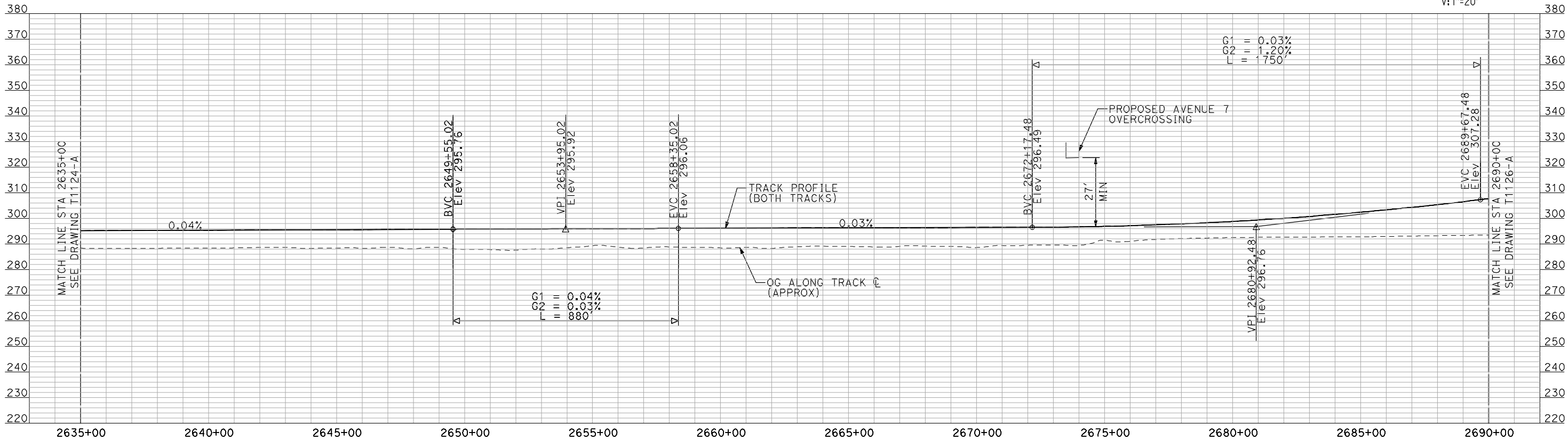
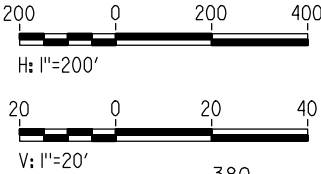


4/28/2011 11:52:58 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\trackwork\hybrid\WF-T-1125-A.dgn  
ShieldsA



PLAN

NOTE:  
ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES  
BASED ON RECORD DRAWINGS AND ARE SHOWN FOR  
INFORMATIONAL PURPOSES ONLY.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

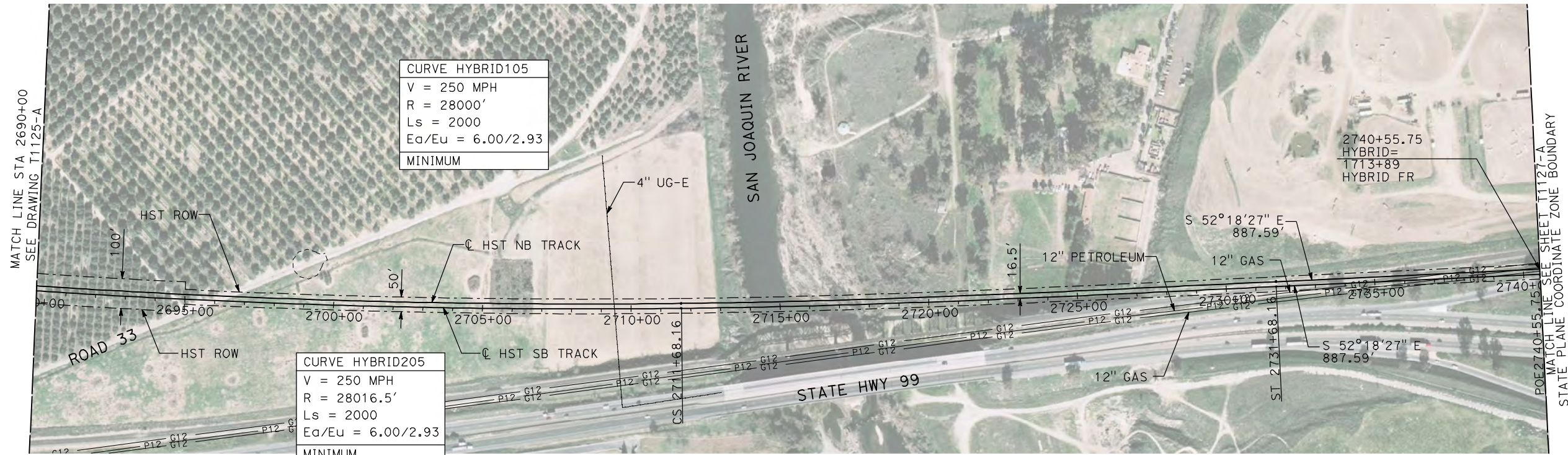
PLAN AND PROFILE  
STA 2635+00 TO STA 2690+00

CONTRACT NO. HSR06-007
DRAWING NO. T1125-A
SCALE AS SHOWN
SHEET NO. ### OF ###



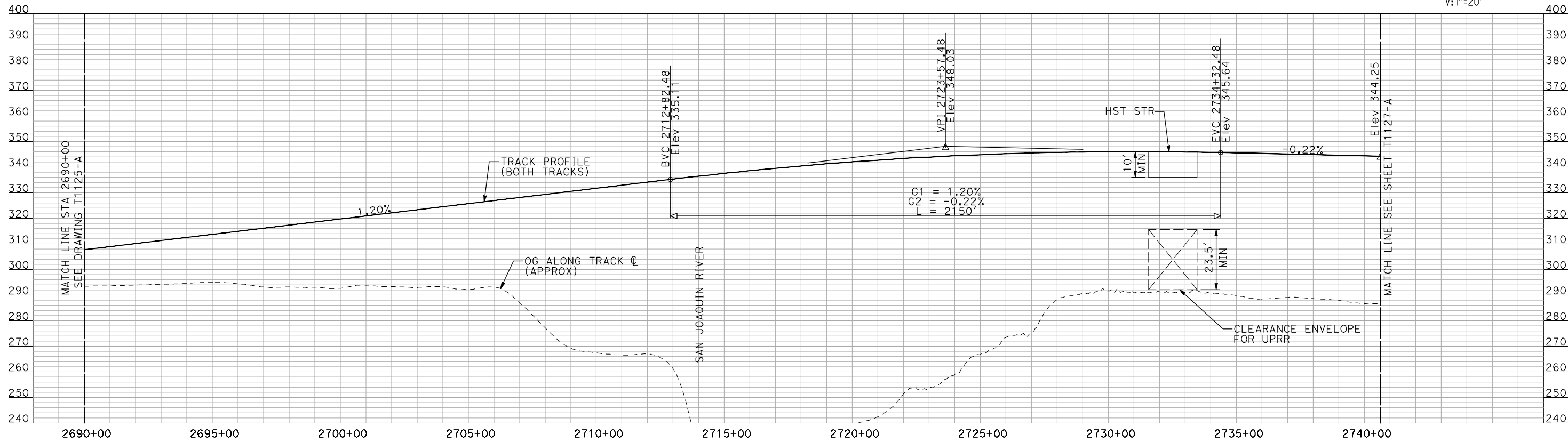
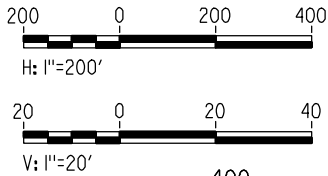
4/28/2011 11:53:18 AM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\trackwork\hybrid\WF-T-1126-A.dgn

ShieldsA



PLAN

- NOTES:
1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
  2. FOR CONTROLLING CLEARANCE ENVELOPE, SEE T1128-A AND T1131-A.



PROFILE

"SEE T3000-T3017 DRAWINGS FOR  
TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY A. SHIELDS
DRAWN BY H. SULLIVAN
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

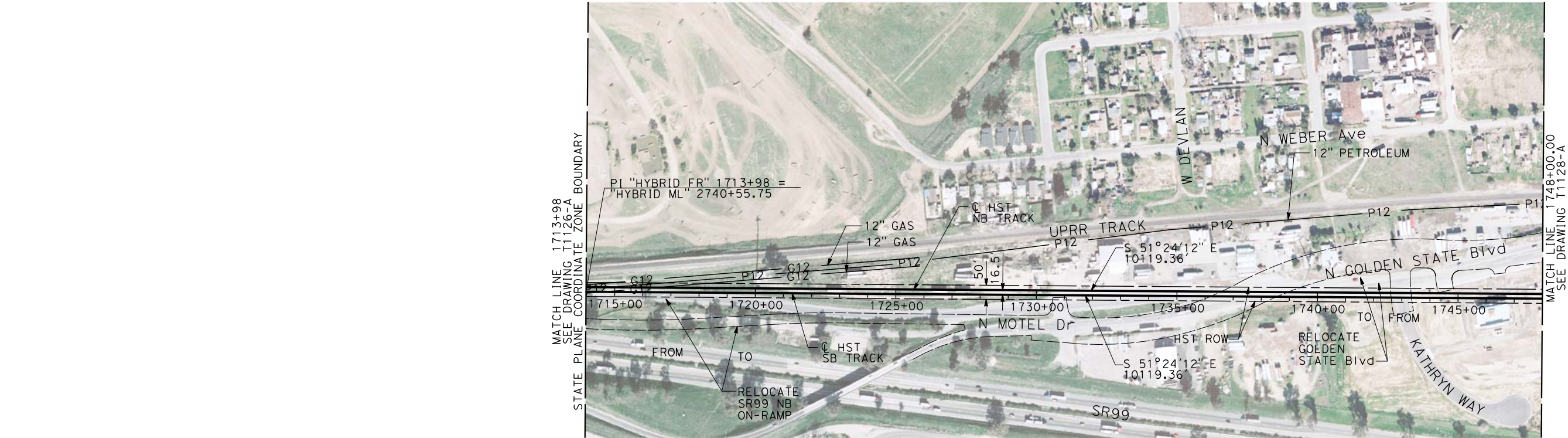


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

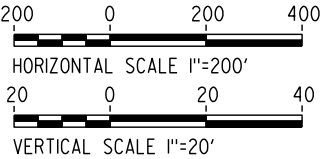
PLAN AND PROFILE  
STA 2690+00 TO STA 2740+55.75

CONTRACT NO. HSR06-007
DRAWING NO. T1126-A
SCALE AS SHOWN
SHEET NO. ### OF ###



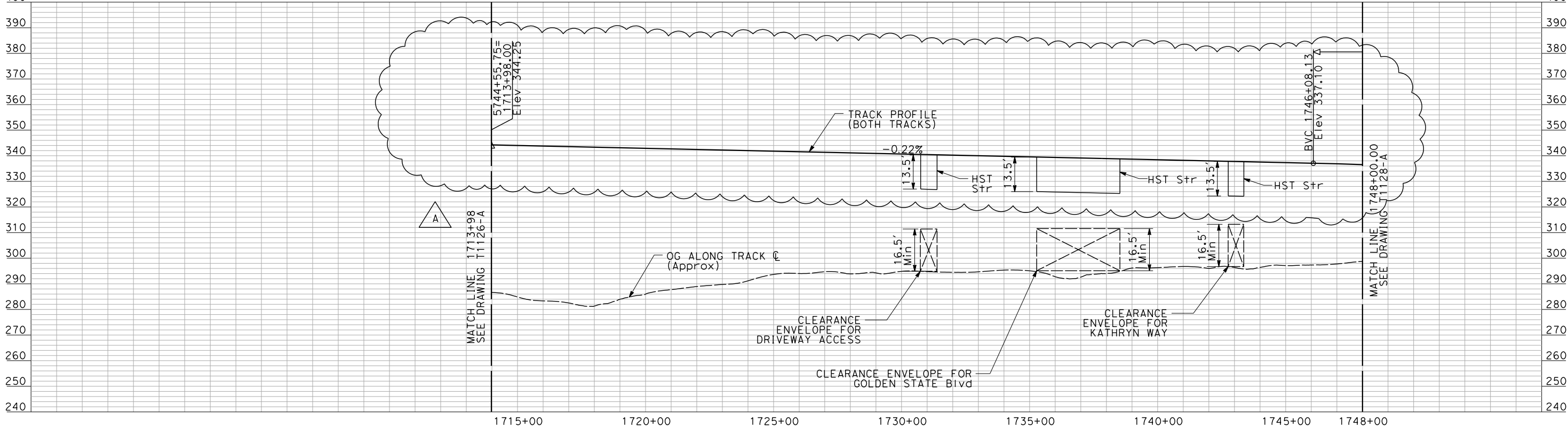


PLAN



NOTES:

1. ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.



PROFILE

ADDENDUM 4 - RFP HSR 11-16

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION
A	07-2012	AS	AB	DM	REVISED FOR ADDENDUM 4

DESIGNED BY A. SHIELDS
DRAWN BY A. SHIELDS
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE MAY 2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

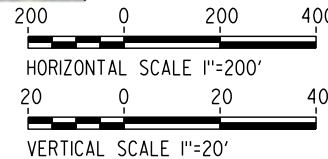
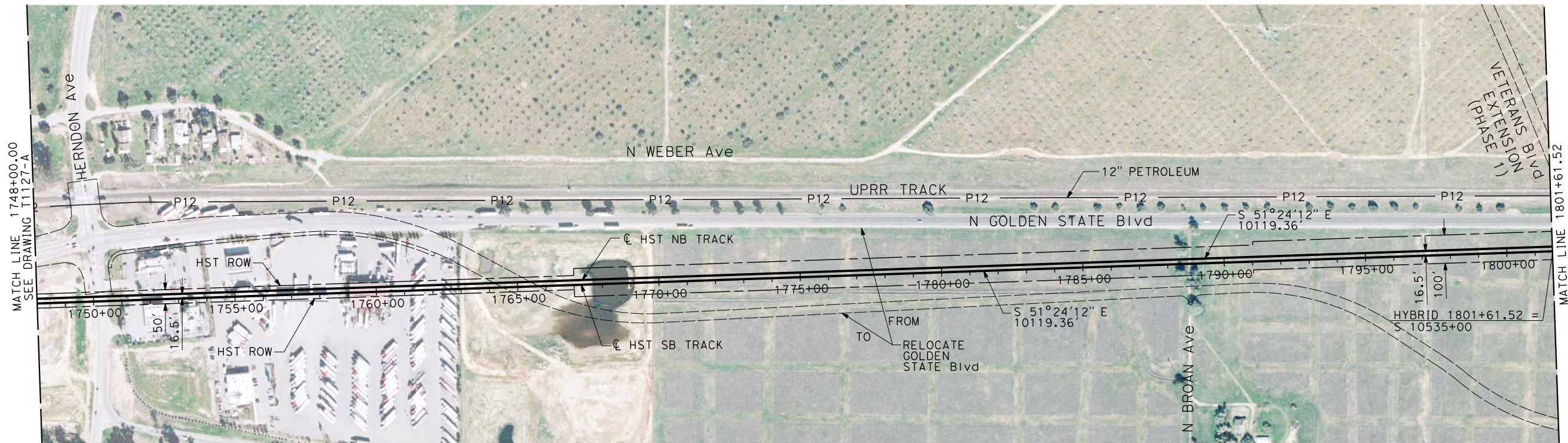
HYBRID

PLAN AND PROFILE  
STA 1713+98 TO STA 1748+00

CONTRACT NO. HSR06-007
DRAWING NO. T1127-A-4A
SCALE AS SHOWN
SHEET NO.

USERNAME => \$USER  
DGN FILE => \$REQUEST

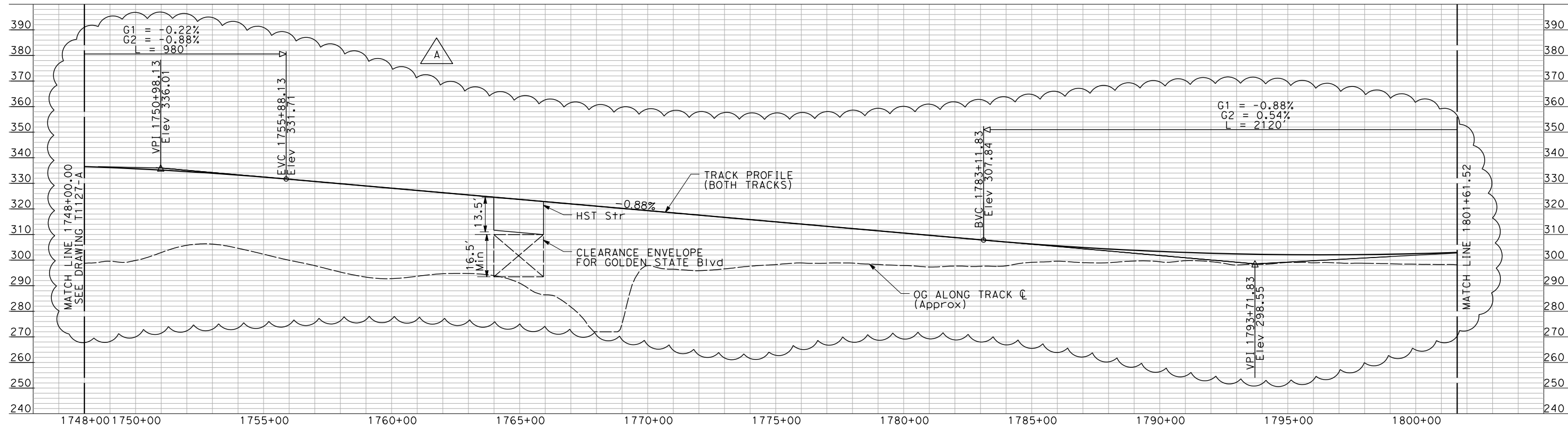




NOTES:

- ALL UTILITIES SHOWN ARE EXISTING UTILITY LINES BASED ON RECORD DRAWINGS AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- TRACKS CLOSER THAN 102 FT TO THE NEAREST EXISTING FREIGHT TRACKS WILL INCLUDE SAFETY BARRIERS, BERMS, OR WALLS AS REQUIRED.

PLAN



PROFILE

ADDENDUM 4 - RFP HSR 11-16

"SEE T3000-T3017 DRAWINGS FOR TYPICAL SECTION LIMITS AND DETAILS"

REV	DATE	BY	CHK	APP	DESCRIPTION
A	07-2012	AS	AB	DM	REVISED FOR ADDENDUM 4

DESIGNED BY A. SHIELDS
DRAWN BY A. SHIELDS
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE MAY 2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

HYBRID

PLAN AND PROFILE  
STA 1748+00 TO STA 1801+61.52

CONTRACT NO. HSR06-007
DRAWING NO. T1128-A-4A
SCALE AS SHOWN
SHEET NO.

USERNAME => \$USER  
DGN FILE => \$REQUEST



# CALIFORNIA HIGH-SPEED TRAIN

## HST Structure Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
**Merced to Fresno Section**

Viaducts & Stream Crossings  
Hybrid Alternative

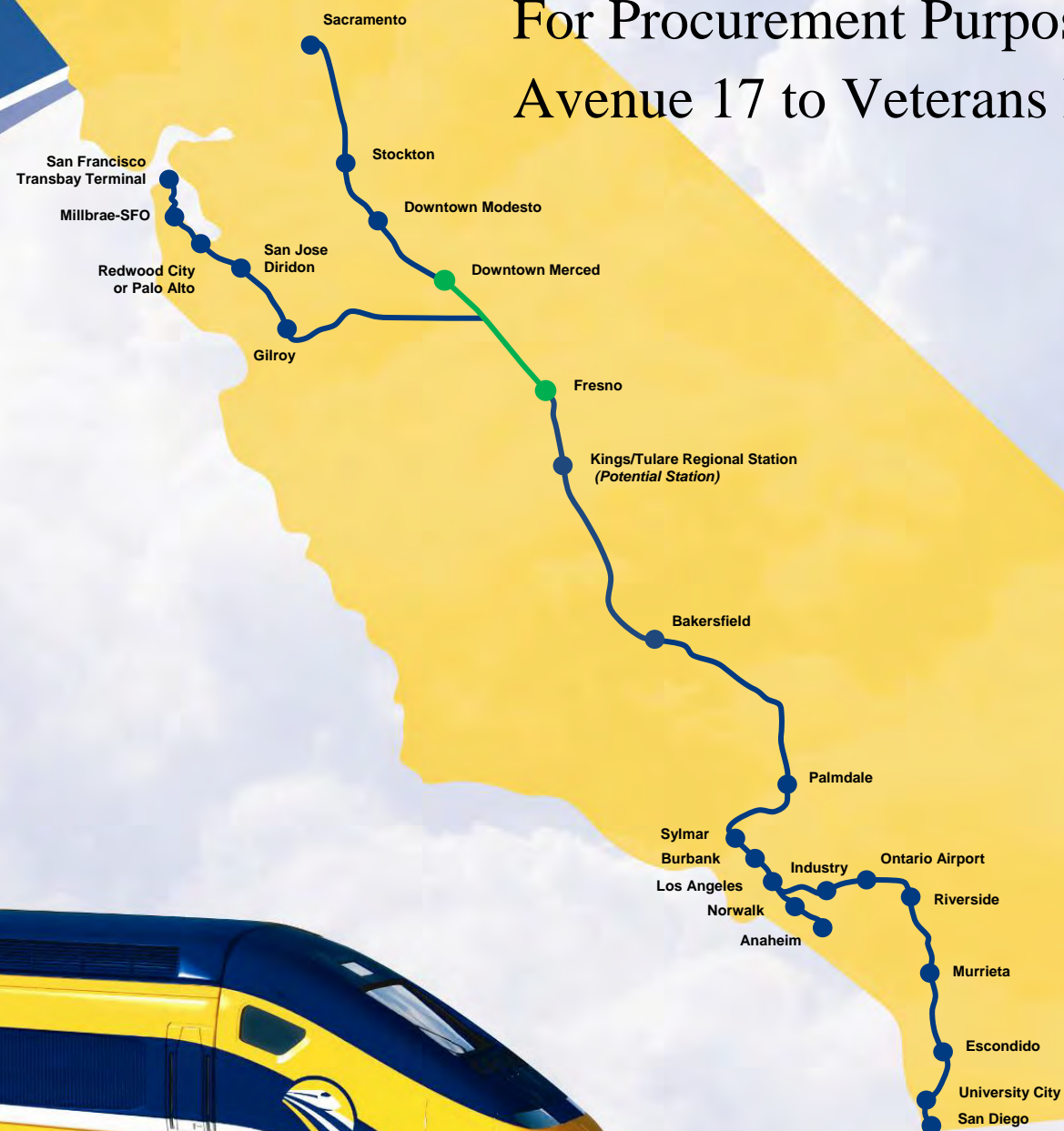
May 2011





**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration





					DESIGNED BY H. Lee	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811  
					DRAWN BY B. Dolan		
					CHECKED BY T. Barnard		
					IN CHARGE A. Boone		
					DATE 04/29/2011		
DATE	BY	CHK	APP	DESCRIPTION			



**CALIFORNIA**

*HIGH-SPEED RAIL AUTHORITY*

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**

**MERCED TO FRESNO**

ALIGNMENT HYBRID

AVENUE 24




INDEX OF DRAWINGS

SHEET 1 OF 2

CONTRACT NO.	HSR06-00
DRAWING NO.	SB012
SCALE	NO SCALE
SHEET NO.	OF

SHT NO	DWG NO	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
HYBRID AVENUE 24 VIADUCT					
	<del>SV1873</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1355+50 TO STA 1368+50</del>
	<del>SV1874</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1368+50 TO STA 1381+50</del>
	<del>SV1875</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1381+50 TO STA 1394+50</del>
	<del>SV1876</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1394+50 TO STA 1407+50</del>
	<del>SV1877</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1407+50 TO STA 1420+50</del>
	<del>SV1878</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1420+50 TO STA 1433+50</del>
	<del>SV1879</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1433+50 TO STA 1446+50</del>
	<del>SV1880</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 201</del>	<del>STA 1446+50 TO STA 1459+50</del>
	<del>SV1885</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 2678+50 TO STA 2691+50</del>
	<del>SV1886</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 2691+50 TO STA 2704+50</del>
	<del>SV1887</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 2704+50 TO STA 2717+50</del>
	<del>SV1888</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 2717+50 TO STA 2730+50</del>
	<del>SV1889</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 2730+50 TO STA 2740+55.75</del>
	<del>SV1890</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 1713+98 TO STA 1723+00</del>
	<del>SV1891</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 1723+00 TO STA 1737+00</del>
	<del>SV1892</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 1737+00 TO STA 1751+00</del>
	<del>SV1893</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 1751+00 TO STA 1765+00</del>
	<del>SV1894</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 203</del>	<del>STA 1765+00 TO STA 1772+78</del>
	<del>SV1911</del>	<del>HYBRID MERCED CONNECTION SB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 211</del>	<del>STA 5070+50 TO STA 5083+50</del>
	<del>SV1912</del>	<del>HYBRID MERCED CONNECTION SB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 211</del>	<del>STA 5083+50 TO STA 5096+50</del>
	<del>SV1913</del>	<del>HYBRID MERCED CONNECTION SB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 211</del>	<del>STA 5096+50 TO STA 5109+50</del>
	<del>SV1914</del>	<del>HYBRID MERCED CONNECTION SB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 211</del>	<del>STA 5109+50 TO STA 5122+50</del>
	<del>SV1915</del>	<del>HYBRID MERCED CONNECTION SB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 211</del>	<del>STA 5122+50 TO STA 5135+50</del>
	<del>SV1921</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 221</del>	<del>STA 156+50 TO STA 169+50</del>
	<del>SV1922</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 221</del>	<del>STA 169+50 TO STA 182+50</del>
	<del>SV1923</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 221</del>	<del>STA 182+50 TO STA 195+50</del>
	<del>SV1924</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 221</del>	<del>STA 195+50 TO STA 208+50</del>
	<del>SV1925</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 221</del>	<del>STA 208+50 TO STA 221+50</del>
	<del>SV1932</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 298+50 TO STA 311+50</del>
	<del>SV1933</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 311+50 TO STA 324+50</del>
	<del>SV1934</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 324+50 TO STA 337+50</del>
	<del>SV1935</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 337+50 TO STA 350+50</del>
	<del>SV1936</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 350+50 TO STA 363+50</del>
	<del>SV1937</del>	<del>HYBRID WYE CONNECTION NB</del>	<del>AVENUE 24</del>	<del>VIADUCT NO. 222</del>	<del>STA 363+50 TO STA 376+50</del>
	<del>SV2000</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2082+00 TO STA 2095+0</del>
	<del>SV2001</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2095+00 TO STA 2109+00</del>
	<del>SV2002</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2109+00 TO STA 2121+00</del>
	<del>SV2003</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2121+00 TO STA 2135+50</del>
	<del>SV2004</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2135+50 TO STA 2147+00</del>
	<del>SV2005</del>	<del>HYBRID MAIN LINE</del>	<del>AVENUE 21</del>	<del>VIADUCT NO. 501</del>	<del>STA 2147+00 TO STA 2160+00</del>

[illegible]

						DESIGNED BY H. Lee	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811  	 <i>CALIFORNIA</i> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> ALIGNMENT HYBRID AVENUE 24 INDEX OF DRAWINGS SHEET 2 OF 2	CONTRACT NO. HSR06-007
					DRAWN BY E. CISNEROS	DRAWING NO. SB0122					
					CHECKED BY T. Barnard	SCALE No scale					
					IN CHARGE A. Boone	SHEET NO. OF					
					DATE 02/17/2012						
REV	DATE	BY	CHK	APP	DESCRIPTION						

4/29/2011 8:52:29 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\al\15%\_cost\_reduction\_submittal\ave 21\WF-SB-0201.dgn LeeC10

GENERAL NOTES

ABBREVIATIONS

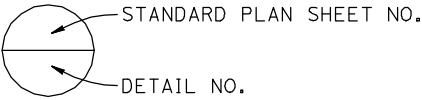
SYMBOLS

Ave	avenue
BB	beginning of bridge
BC	begin horizontal curve
	box culvert
Beg	begin
Blvd	boulevard
BVC	beginning of vertical curve
CL	center line
CIDH	cast-in-drilled-hole
CIP	cast-in-place
Clr	clear
Col	column
Conc	concrete
CS	curve to spiral
Ø	diameter
Dwg.	drawing
EB	end of bridge
[EB]	eastbound
EC	end horizontal curve
EVC	end of vertical curve
Exist	existing
HST	high speed train
ID	identification designation
Max	maximum
Med	median
Min	minimum
ML	match line
N	north
NB	northbound
No.	number
NTS	not to scale
OCS	overhead contact system
OG	original ground
OH	overhead
PC	point of curve
PCC	point of compound circular curves
PCS	point of curve to spiral
PI	point of intersection of two tangents
POC	point of curve
POS	point of spiral
POT	point of tangent
PRC	point of reverse curves
PC/PS	precast/prestressed
PSC	point of spiral to curve
PT	point of tangency
R	radius of curvature in feet
R/C	rate of change
Rd	road
R/W	right of way
S	slope
SB	southbound
SC	spiral to curve
Shld	shoulder
SPO	point of origin of compound spiral
SS	point of spiral to spiral
ST	spiral to tangent
St	street
STA	station
TS	tangent to spiral
Typ	typical
VC	vertical curve
WB	westbound

	Match Line
	HST Track
	Proposed HST Right-of-Way
	Existing UPRR Right-of-Way
	Original Ground

CALTRANS STANDARD PLANS DATED MAY 2006

B0-3 BRIDGE DETAILS



LEGEND

	Indicates Direction of Vehicle Traffic
	Indicates Direction of Water Flow
	North Arrow

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

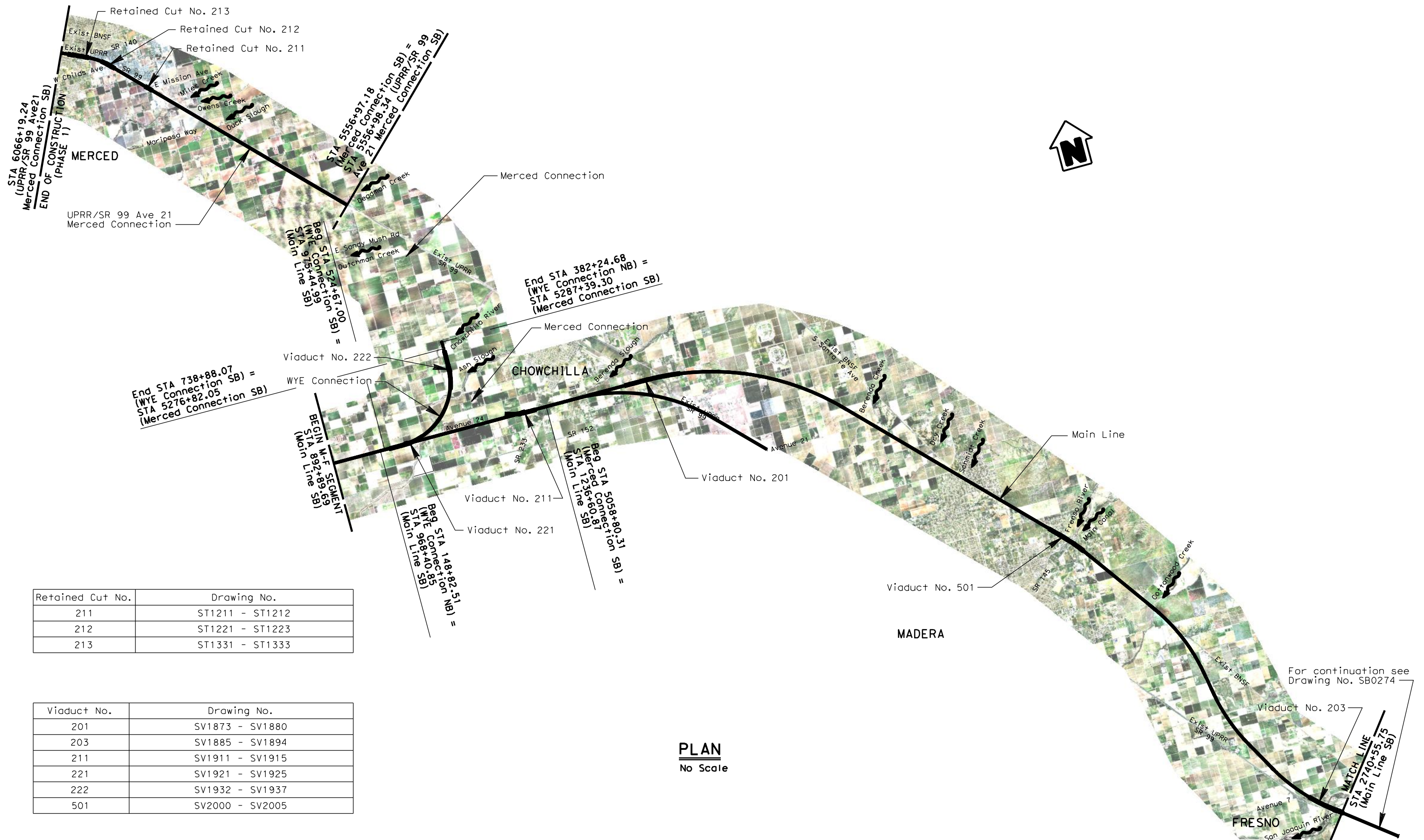


CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
ALIGNMENTS  
AVENUE 21 AND 24  
GENERAL NOTES, ABBREVIATIONS,  
SYMBOLS AND LEGENDS

CONTRACT NO. HSR06-007
DRAWING NO. SB0201
SCALE No scale
SHEET NO. OF



c:\snerose 2/16/2012 12:38:22 PM \\usscri1fp001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SB-0271.dgn



Retained Cut No.	Drawing No.
211	ST1211 - ST1212
212	ST1221 - ST1223
213	ST1331 - ST1333

Viaduct No.	Drawing No.
201	SV1873 - SV1880
203	SV1885 - SV1894
211	SV1911 - SV1915
221	SV1921 - SV1925
222	SV1932 - SV1937
501	SV2000 - SV2005

PLAN  
No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. LEE
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

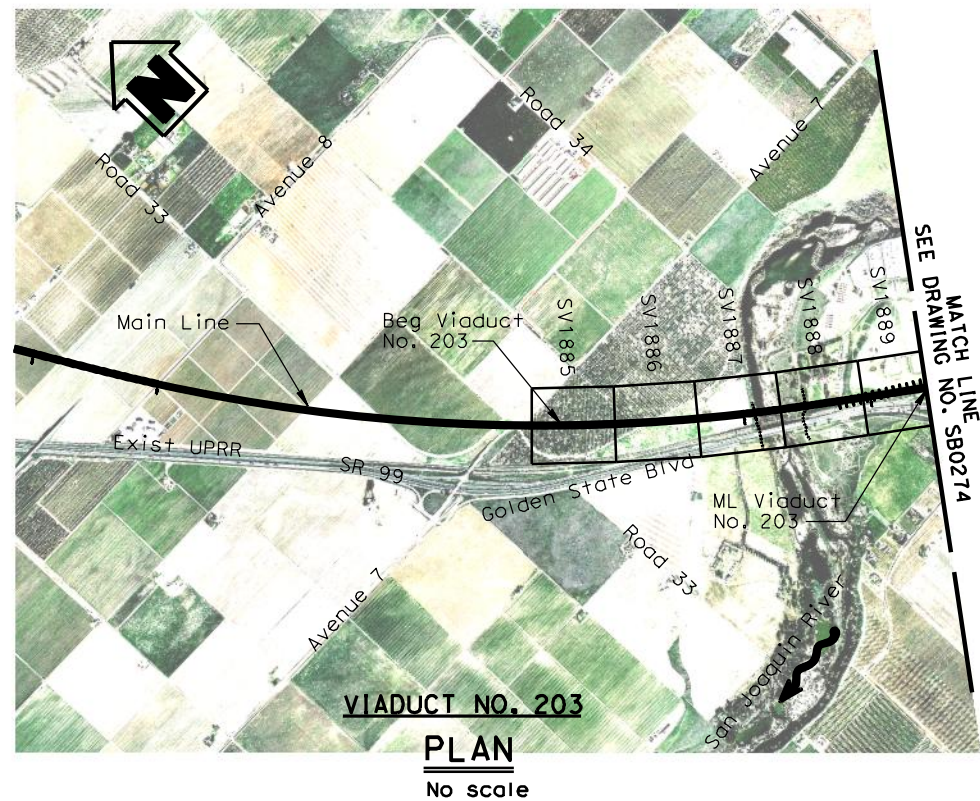
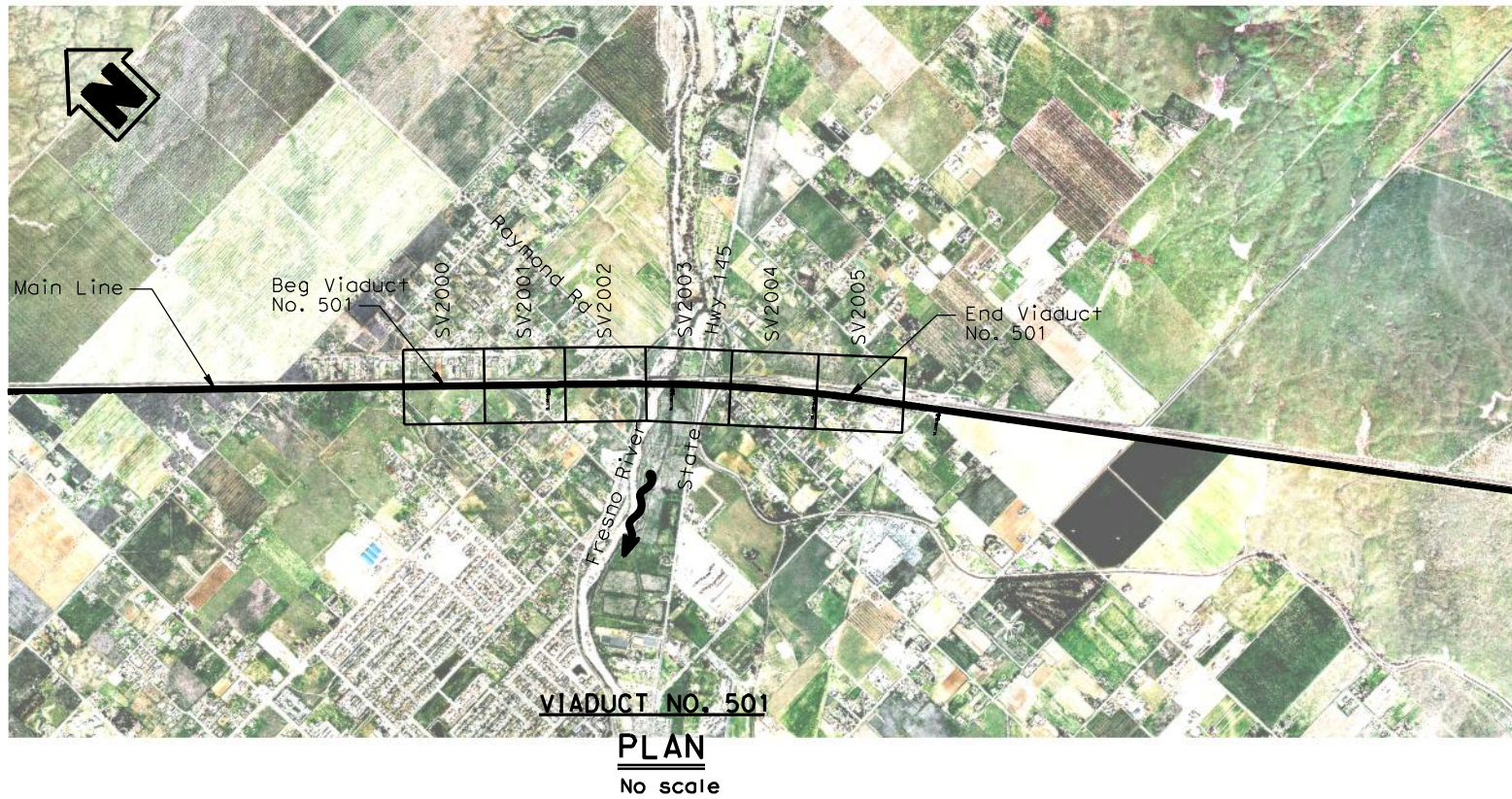


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENT HYBRID  
AVENUE 24  
LOCATION PLAN  
VIADUCTS

CONTRACT NO. HSR06-007
DRAWING NO. SB0271
SCALE As shown
SHEET NO. OF



cisnerose 2/16/2012 11:48:17 AM \\usscri1p001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SB-0272.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
H. Lee  
DRAWN BY  
E. CISNEROS  
CHECKED BY  
T. Barnard  
IN CHARGE  
A. Boone  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENT HYBRID  
AVENUE 24  
KEY MAP  
SHEET 1 OF 3

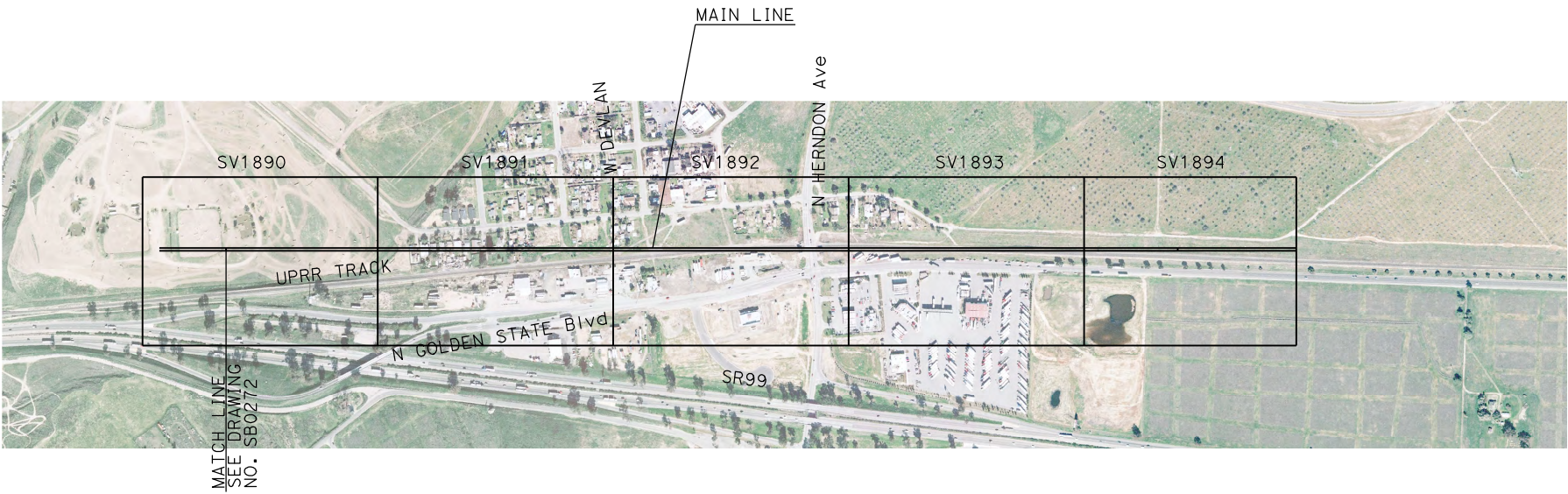
CONTRACT NO.  
HSR06-007

DRAWING NO.  
SB0272

SCALE  
As shown

SHEET NO.  
OF





Note:  
For modifications to local roads,  
see Volume 4: SR99 & Local Road  
Modifications - Fresno County'.

**VIADUCT NO. 203**  
**PLAN**  
No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

**15% DRAFT  
SUBMITTAL  
FOR INTERNAL  
USE ONLY**

**NOT FOR  
CONSTRUCTION**

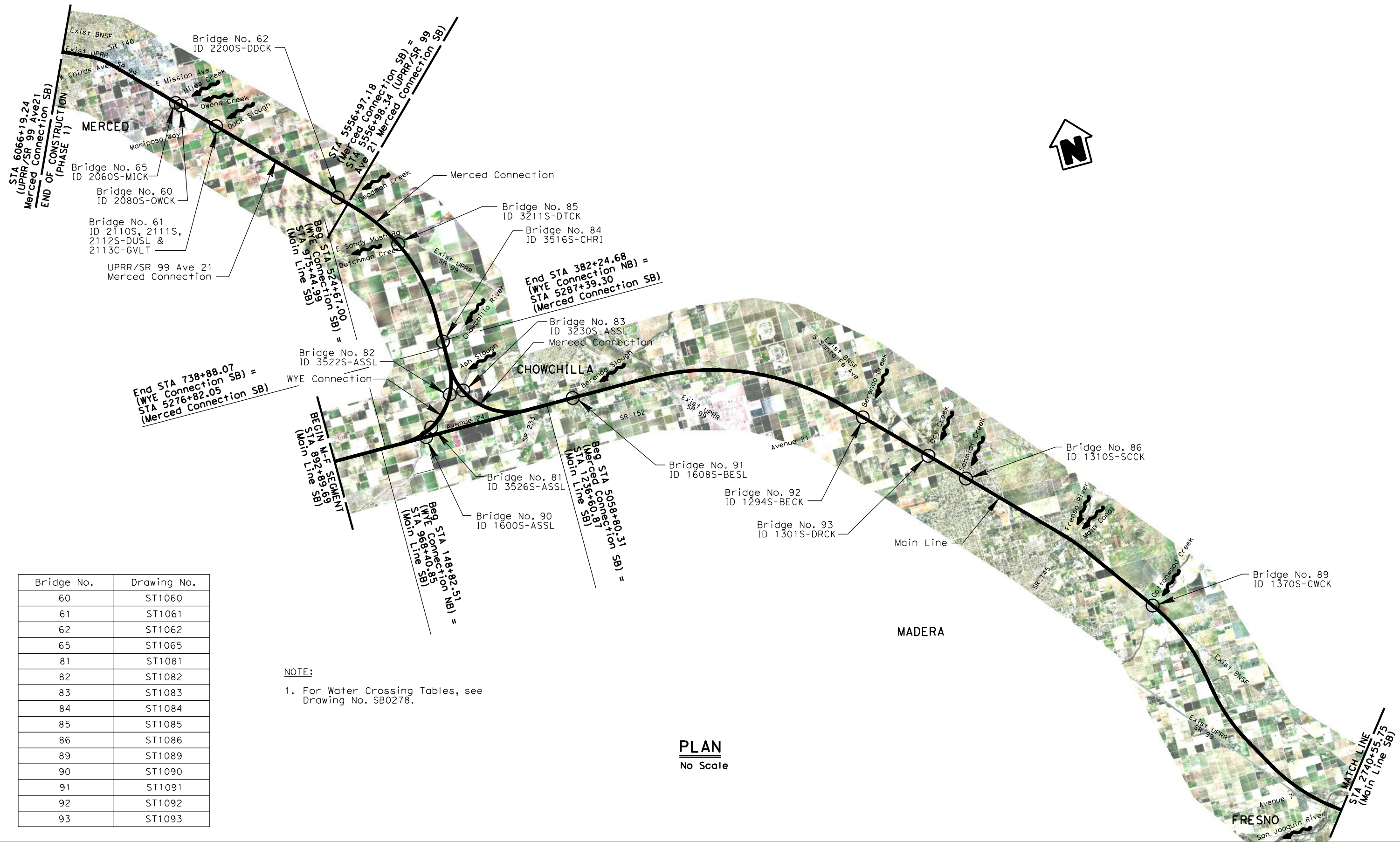


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

ALIGNMENT HYBRID  
AVENUE 24  
KEY MAP  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. SB0274
SCALE NONE
SHEET NO. OF

c:\p001\p001\cadd\hsr\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SB-0277.dgn 2/16/2012 12:30:15 PM \\usscrip001\cadd\hsr\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SB-0277.dgn



Bridge No.	Drawing No.
60	ST1060
61	ST1061
62	ST1062
65	ST1065
81	ST1081
82	ST1082
83	ST1083
84	ST1084
85	ST1085
86	ST1086
89	ST1089
90	ST1090
91	ST1091
92	ST1092
93	ST1093

NOTE:  
1. For Water Crossing Tables, see Drawing No. SB0278.

PLAN  
No Scale

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. LEE
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/17/2012

RECORD SET 15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENT HYBRID  
AVENUE 24  
LOCATION PLAN  
WATER CROSSING BRIDGES

CONTRACT NO. HSR06-007
DRAWING NO. SB0277
SCALE As shown
SHEET NO. OF



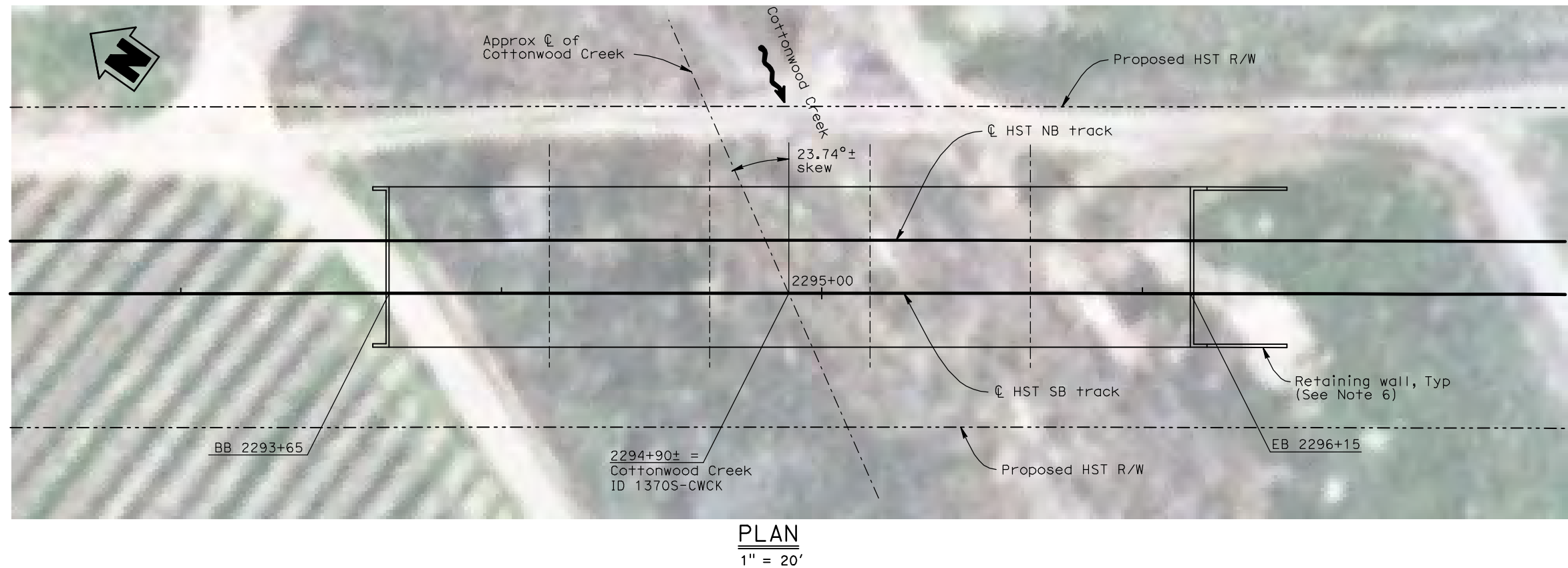
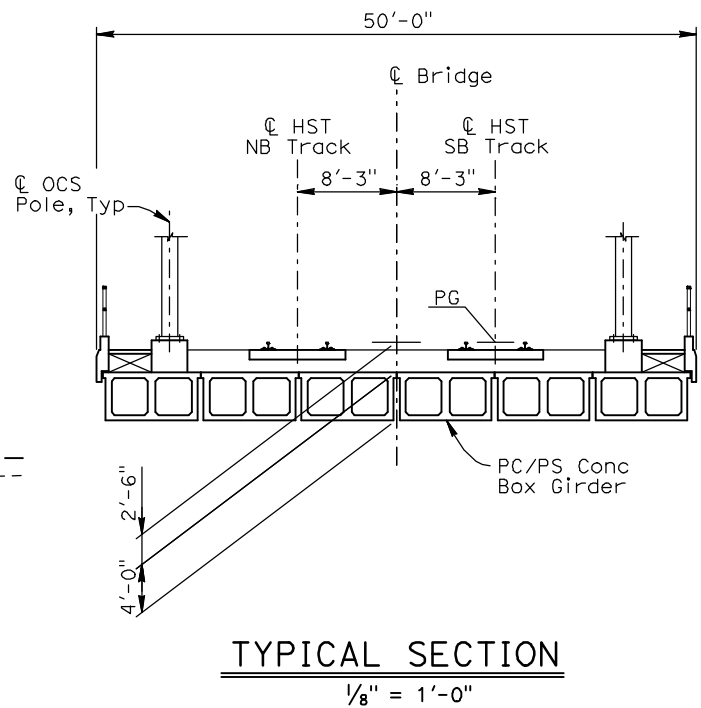
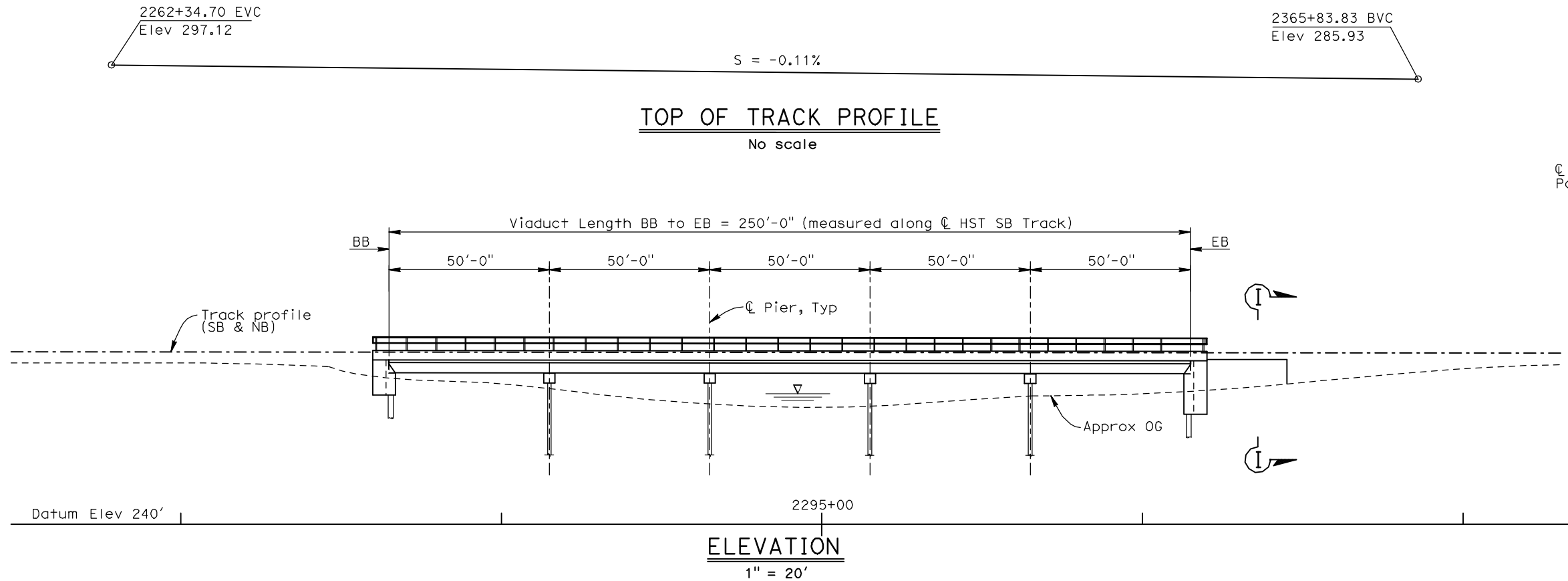
STATION	ALIGNMENT ID	FEATURE CROSSED			STRUCTURE	
		NAME	ID	TRACK SUPPORT	TYPE	NO. x SPAN
1041+26±	Hybrid-24ML SB	Ash Slough	1600S-ASSL	A+ grade	PC/PS (90)	12x50'
1052+30±	Hybrid-24ML SB	Ash Main Canal	1602C-AMCA	A+ grade	BC	-
1144+60±	Hybrid-24ML SB	Bethel Canal	1604C-BTCA	A+ grade	BC	-
1269+00±	Hybrid-24ML SB	Berenda Canal	1606C-BECA	A+ grade	BC	-
1278+00±	Hybrid-24ML SB	Berenda Slough	1608S-BESL	A+ grade	PC/PS (91)	8x50'
1329+10±	Hybrid-24ML SB	-	1610C	A+ grade	BC	-
1366+00±	Hybrid-24ML SB	Califa Lateral A	1612C-CALA	Retained fill	BC	-
1398+21±	Hybrid-24ML SB	-	1614P	Elevated	-	-
1462+69±	Hybrid-24ML SB	Califa Canal	1464C-CACA	A+ grade	BC	-
1635+28±	Hybrid-24ML SB	Lat 32.2	1257C-322	A+ grade	BC	-
1752+58±	Hybrid-24ML SB	Berenda Creek	1294S-BECK	A+ grade	PC/PS (92)	3x30'
1871+41±	Hybrid-24ML SB	Dry Creek	1301S-DRCK	A+ grade	PC/PS (93)	3x40'
1909+26±	Hybrid-24ML SB	24.2	1306C-242	A+ grade	BC	-
1938+80±	Hybrid-24ML SB	Schmidt Creek	1310S-SCCK	A+ grade	PC/PS (86)	3x40'
1988+88±	Hybrid-24ML SB	-	1320S	A+ grade	BC	-
2123+95±	Hybrid-24ML SB	Fresno River	1330S-FRRI	A+ grade	PC/PS (87)	9x50'
2133+48±	Hybrid-24ML SB	Main Canal	1340C-MACA	A+ grade	PC/PS (88)	3x40'
2294+90±	Hybrid-24ML SB	Cottonwood Creek	1370S-CWCK	A+ grade	PC/PS (89)	5x50'
2323+25±	Hybrid-24ML SB	-	1375C	A+ grade	BC	-
2466+06±	Hybrid-24ML SB	6.2-14.0-W	1278C-6214	A+ grade	BC	-
2471+06±	Hybrid-24ML SB	6.2-14.0-W	1279C-6214	A+ grade	BC	-
2522+33±	Hybrid-24ML SB	-	1380C	A+ grade	BC	-
2619+06±	Hybrid-24ML SB	Mid Lateral 6.2-9.25	1381C-ML2S	A+ grade	BC	-
2678+16±	Hybrid-24ML SB	6.2-9.2-5.05	1395C-6292	A+ grade	BC	-
2713+99±	Hybrid-24ML SB	San Joaquin River	1400S-SJRI	Elevated	-	-
5575+75±	UPRR/SR 99-21MC SB	Deadman Creek	2200S-DDCK	A+ grade	PC/PS (62)	3x30'
5605+85±	UPRR/SR 99-21MC SB	-	2154C	A+ grade	BC	-
5625+95±	UPRR/SR 99-21MC SB	-	2153C	A+ grade	BC	-
5646+79±	UPRR/SR 99-21MC SB	-	2152C	A+ grade	BC	-
5660+94±	UPRR/SR 99-21MC SB	-	2151C	A+ grade	BC	-
5681+33±	UPRR/SR 99-21MC SB	South Slough/ Russell Lateral	2150C-RULT	A+ grade	BC	-
5736+89±	UPRR/SR 99-21MC SB	Lateral B	2117C-LATB	A+ grade	BC	-
5754+00±	UPRR/SR 99-21MC SB	South Slough/ Lingard Lateral	2116C-SOSL	A+ grade	BC	-
5759+55±	UPRR/SR 99-21MC SB	-	2115C	A+ grade	BC	-
5774+75±	UPRR/SR 99-21MC SB	-	2114C	A+ grade	BC	-
5793+41±	UPRR/SR 99-21MC SB	Givens Lateral	2113C-GVLT	A+ grade	BC	-
5794+09±	UPRR/SR 99-21MC SB	Duck Slough	2110S-DUSL	A+ grade		
5797+99±	UPRR/SR 99-21MC SB	Duck Slough	2111S-DUSL	A+ grade	PC/PS (61)	10x60'
5798+47±	UPRR/SR 99-21MC SB	Duck Slough	2112S-DUSL	A+ grade		
5825+00±	UPRR/SR 99-21MC SB	-	2100D	A+ grade	BC	-
5835+27±	UPRR/SR 99-21MC SB	Lateral A-A	2090D-LTAA	A+ grade	BC	-
5851+98±	UPRR/SR 99-21MC SB	Koff Lateral	2081C-KOLT	A+ grade	BC	-
5860+26±	UPRR/SR 99-21MC SB	Owens Creek	2080S-OWCK	A+ grade	PC/PS (60)	4x50'
5867+22±	UPRR/SR 99-21MC SB	Miles Creek	2060S-MICK	A+ grade	PC/PS (65)	2x50'
5898+35±	UPRR/SR 99-21MC SB	Miles Creek Overflow No. 1	2055S-MCOF	A+ grade	BC	-
5912+25±	UPRR/SR 99-21MC SB	Farmdale Lateral	2050C-FDLT	A+ grade	BC	-
5916+79±	UPRR/SR 99-21MC SB	-	2046D	A+ grade	BC	-
5919+70±	UPRR/SR 99-21MC SB	-	2048D	A+ grade	BC	-
5970+53±	UPRR/SR 99-21MC SB	Lateral D	2042C-LTD	A+ grade	BC	-
5987+81±	UPRR/SR 99-21MC SB	Lateral D	2040C-LTD	A+ grade	BC	-

Note: (1) - Indicates Water Crossing Bridge No. 1, see Drawing No. SB0277.  
21 - Ave 21, MC - Merced Connection, ML - Main Line and WC - WYE Connection

[illegible][illegible]

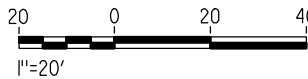


4/27/2011 4:26:46 PM i:\chsr\60022962\Task-02\_merced-fresno\cadd\struct\sheet\aps\hybrid\15%\_cost\_reduction\submittal\WF-ST-1089.dgn LeeC10



**NOTES:**

1. For General Notes, see Drawing No. SB0201.
2. Location of Cottonwood Creek to be verified at further study and design.
3. Bent and abutment orientation to be skewed accordingly, if necessary at further study and design.
4. Existing underground and overhead utilities to be determined.
5. For Section I-I, see Drawing No. SV3004.
6. Retaining wall height and limits are subject to further study and design.
7. Maintenance access will be provided under structure, if required.
8. Final design of the structure will conform to floodplain and freeboard requirement.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

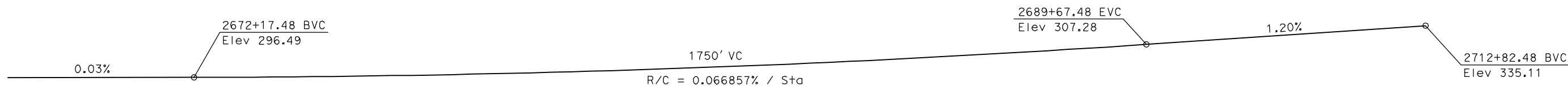
**CH2M HILL**



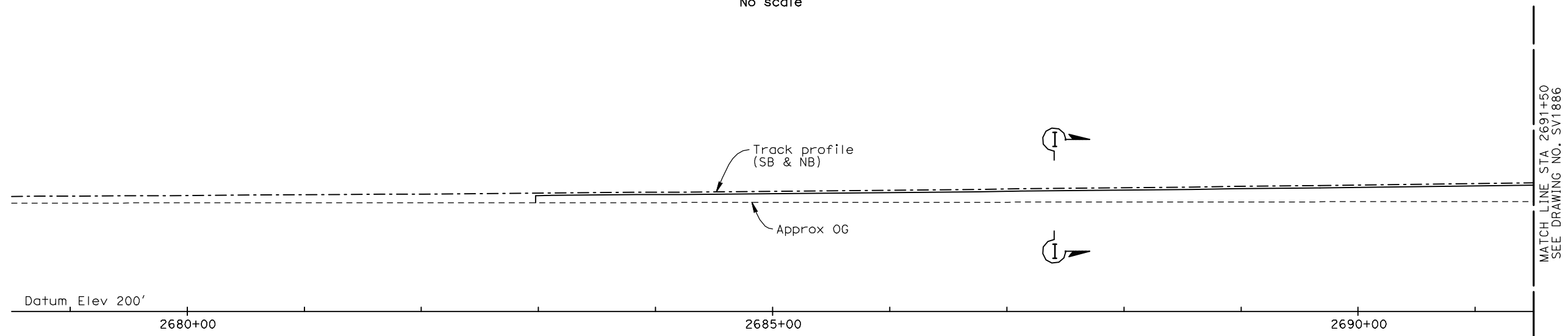
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID MAIN LINE  
AVENUE 24  
COTTONWOOD CREEK  
WATER CROSSING BRIDGE NO. 89

CONTRACT NO. HSR06-007
DRAWING NO. ST1089
SCALE As shown
SHEET NO. OF

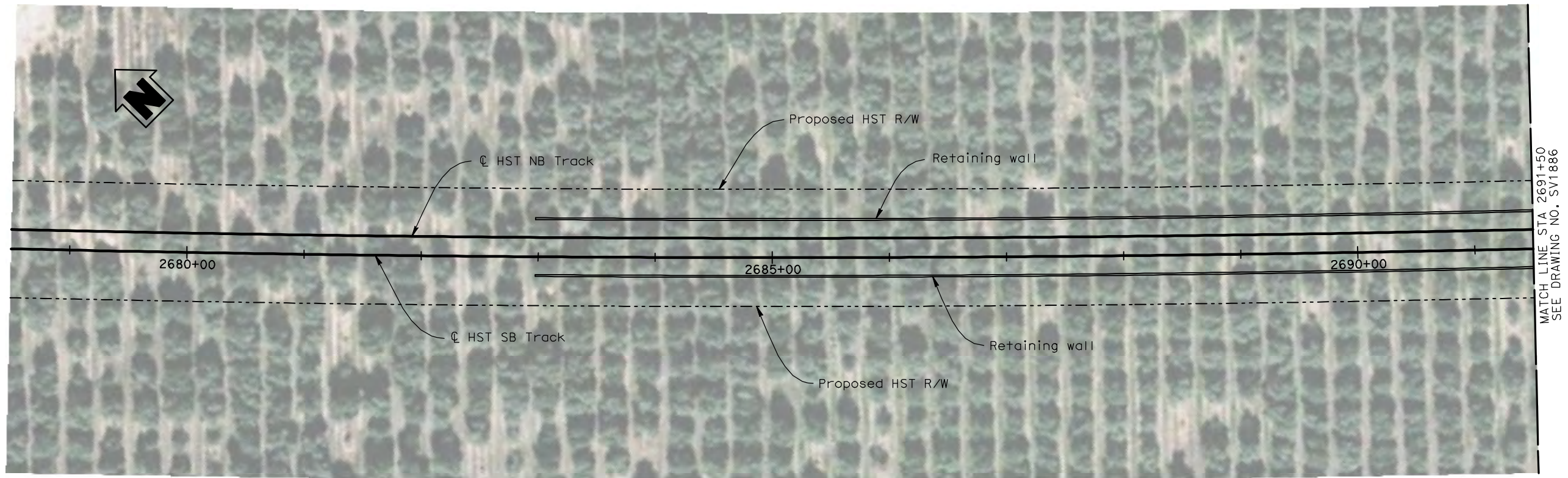
4/27/2011 4:31:08 PM I:\chsr\60022962\Task-02\_merced-fresno\cadd\struct\sheet\aps\hybrid\15%\_cost\_reduction\_submittal\MF-SV-1885.dgn LeeC10



**TOP OF TRACK PROFILE**  
No scale

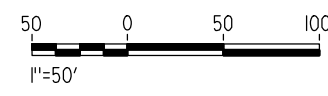


**DEVELOPED ELEVATION**  
1" = 50'



**PLAN**  
1" = 50'

- NOTES:**
1. For General Notes, see Drawing No. SB0201.
  2. For Section I-I, see Drawing No. SV3004.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
T. Barnard

DRAWN BY  
C. Lee

CHECKED BY  
H. Lee

IN CHARGE  
A. Boone

DATE  
04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

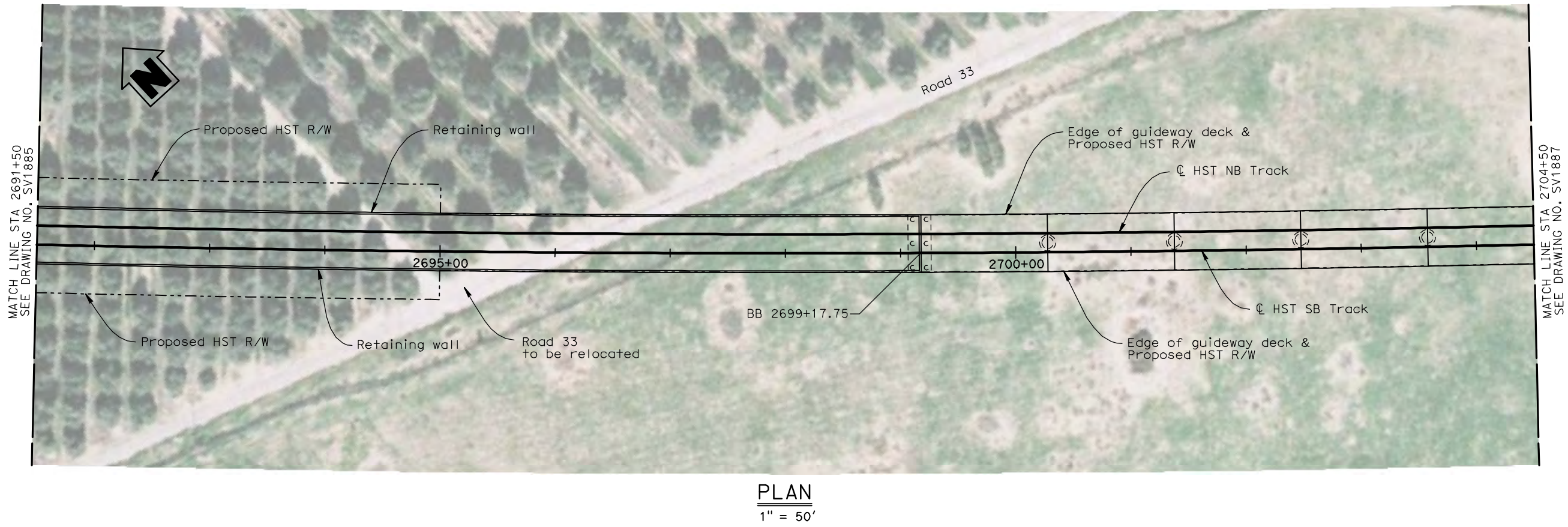
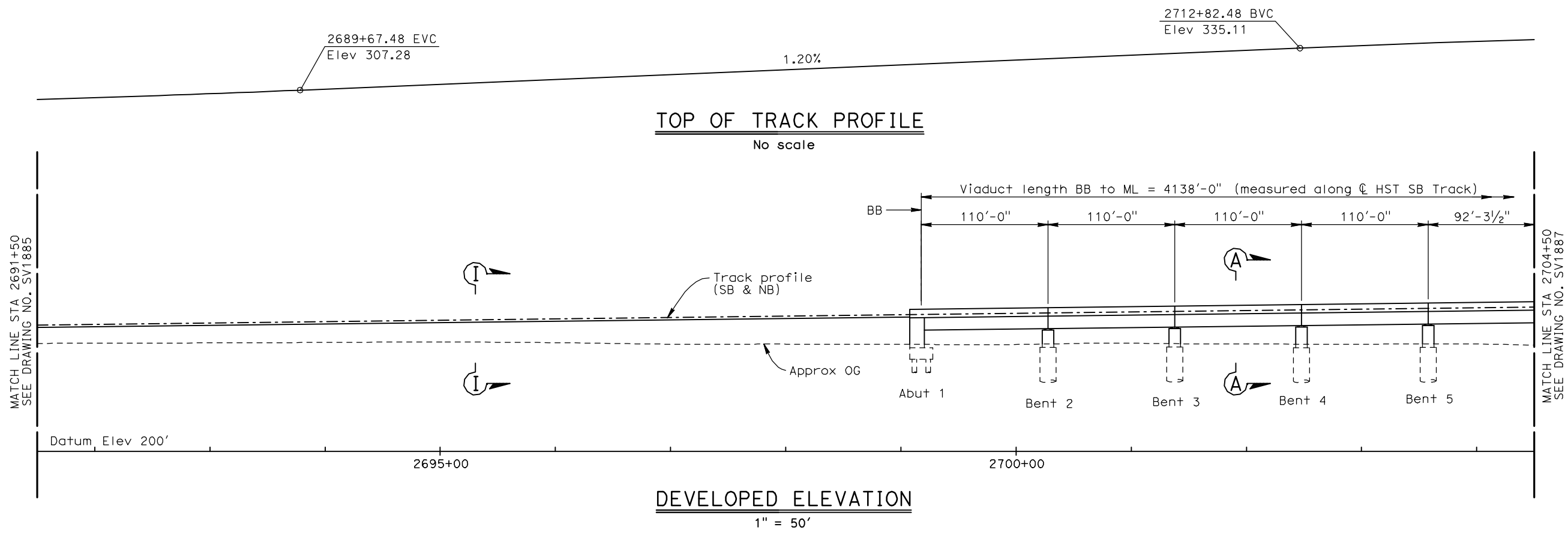


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 2678+50 TO STA 2691+50

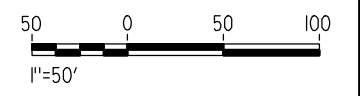
CONTRACT NO. HSR06-007
DRAWING NO. SV1885
SCALE As shown
SHEET NO. OF




4/27/2011 4:31:12 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\hybrid\15%\_cost\_reduction\_submittal\WF-SV-1886.dgn LeeC10



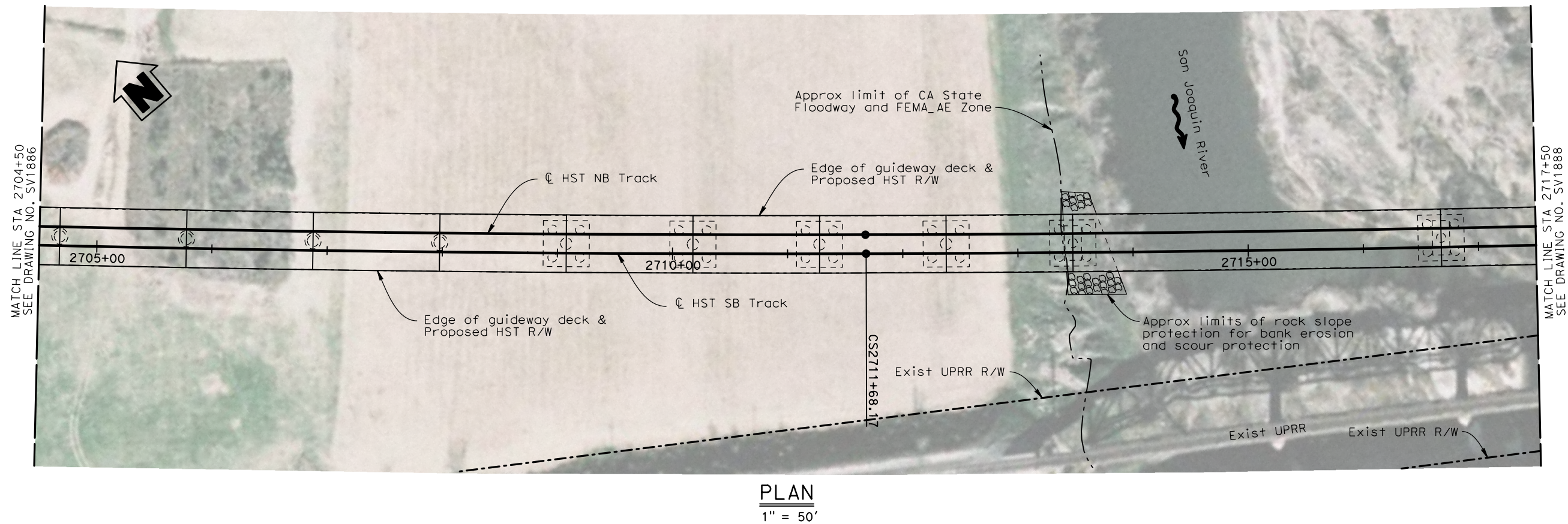
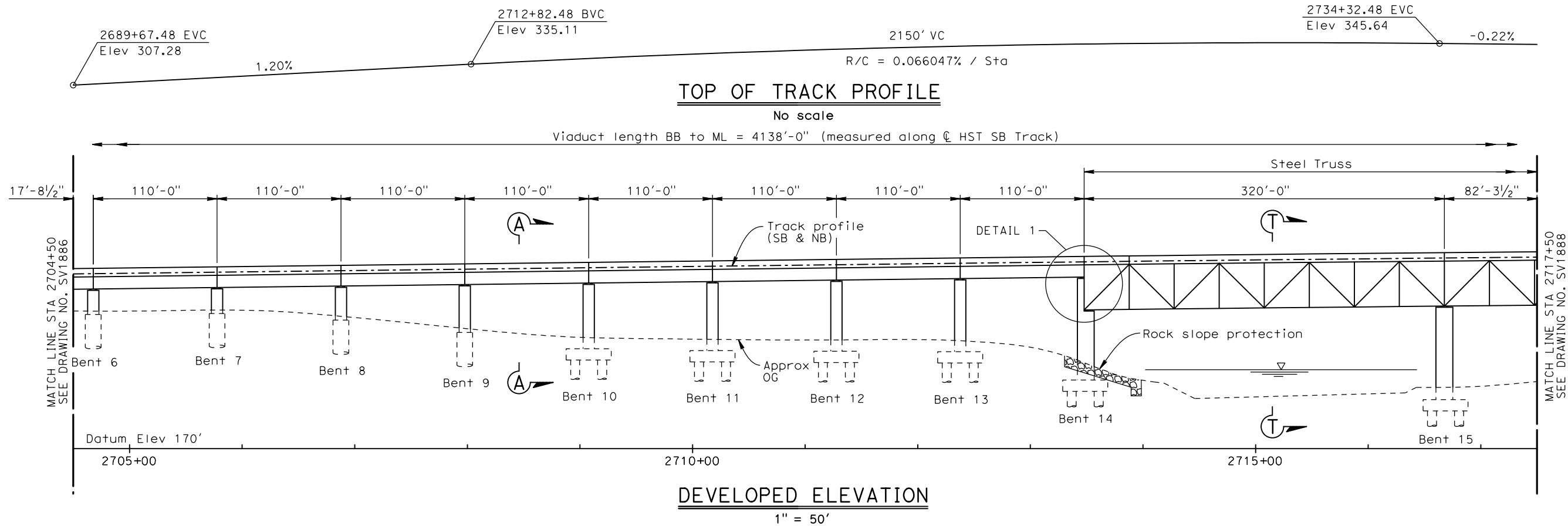
- NOTES:
1. For General Notes, see Drawing No. SB0201.
  2. For Section A-A, see Drawing No. SV3001.
  3. For Section I-I, see Drawing No. SV3004.



						DESIGNED BY T. Barnard	<b>RECORD SET 15% DESIGN SUBMITTAL</b>	<b>AECOM</b> Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811	 <b>CALIFORNIA</b> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO</b>			CONTRACT NO. HSR06-007
						DRAWN BY C. Lee				DRAWING NO. SV1886			
						CHECKED BY H. Lee				SCALE As shown			
						IN CHARGE A. Boone				SHEET NO.			
						DATE 04/29/2011				OF			
REV	DATE	BY	CHK	APP	DESCRIPTION								

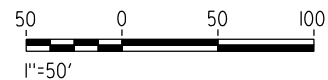


I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID\_24\15%\_cost\_reduction\_submittal\WF-SV-1887.dgn 2/22/2012 6:09:14 PM lsec10



**NOTES:**

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.
3. For Section S-S and Detail 1, see Drawing No. SV3006.
4. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/22/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

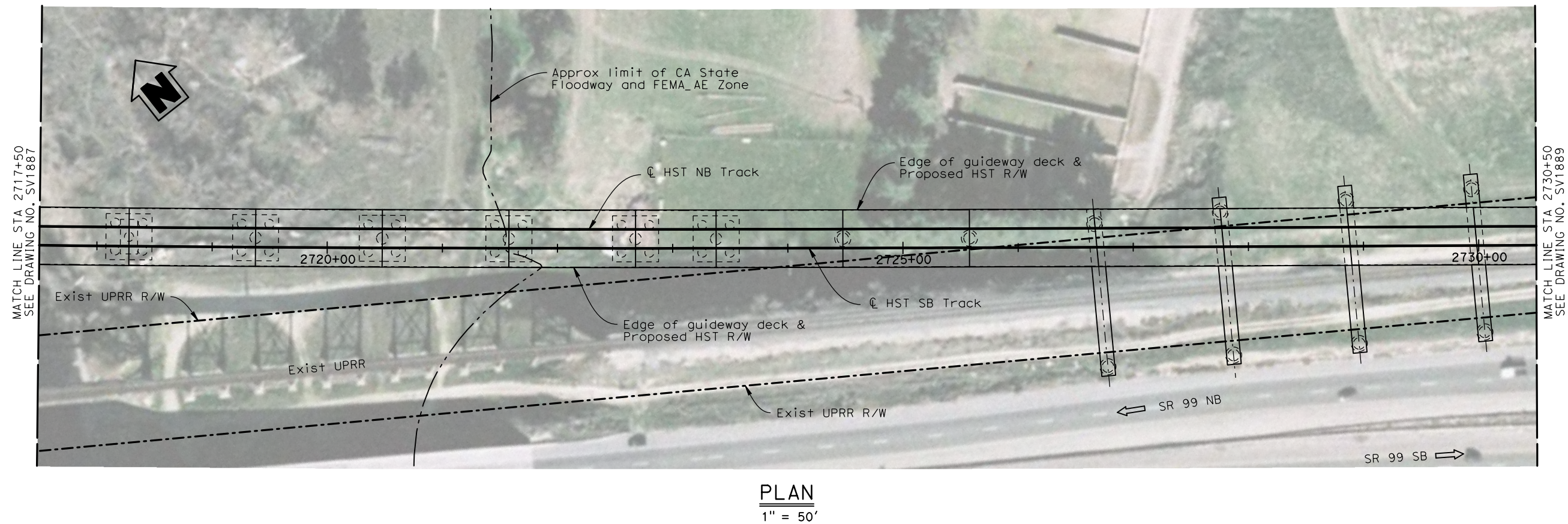
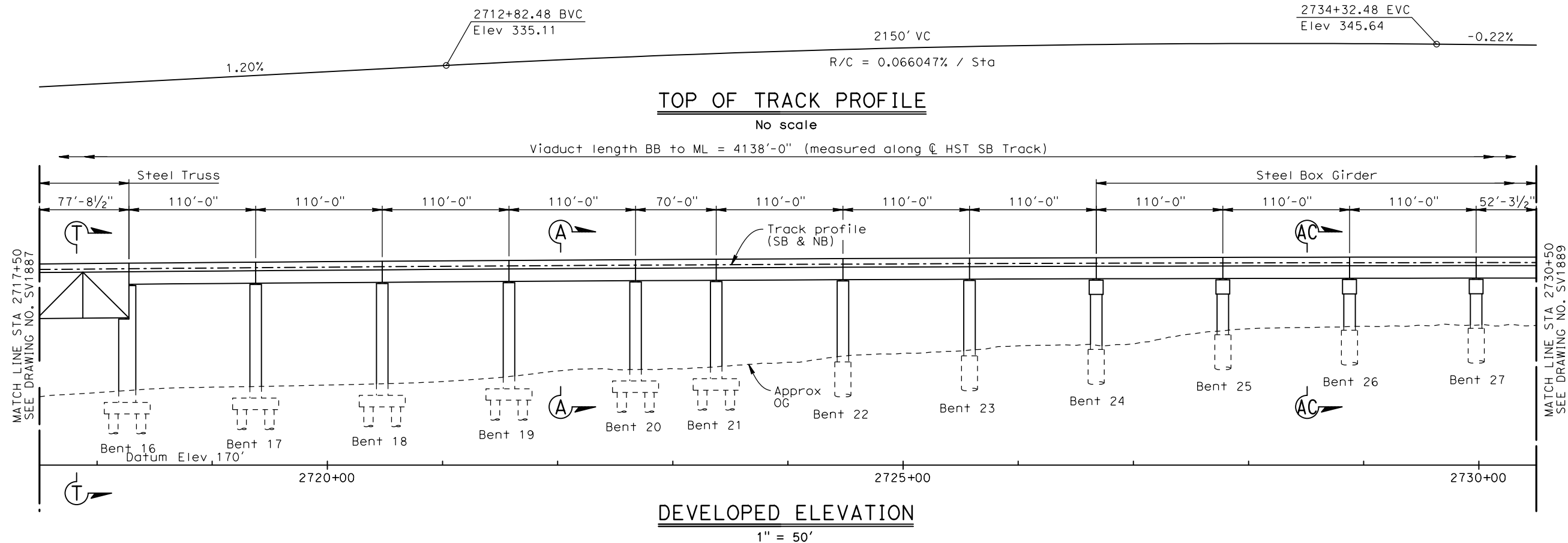


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 2704+50 TO STA 2717+50

CONTRACT NO. HSR06-007
DRAWING NO. SV1887
SCALE As shown
SHEET NO. OF



I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID\_24\15%\_cost\_reduction\_submittal\WF-SV-1888.dgn 2/22/2012 6:07:07 PM lsec10



NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.
3. For Section S-S, see Drawing No. SV3006.
4. For Section AC-AC, see Drawing No. SV3102.
5. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 02/22/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

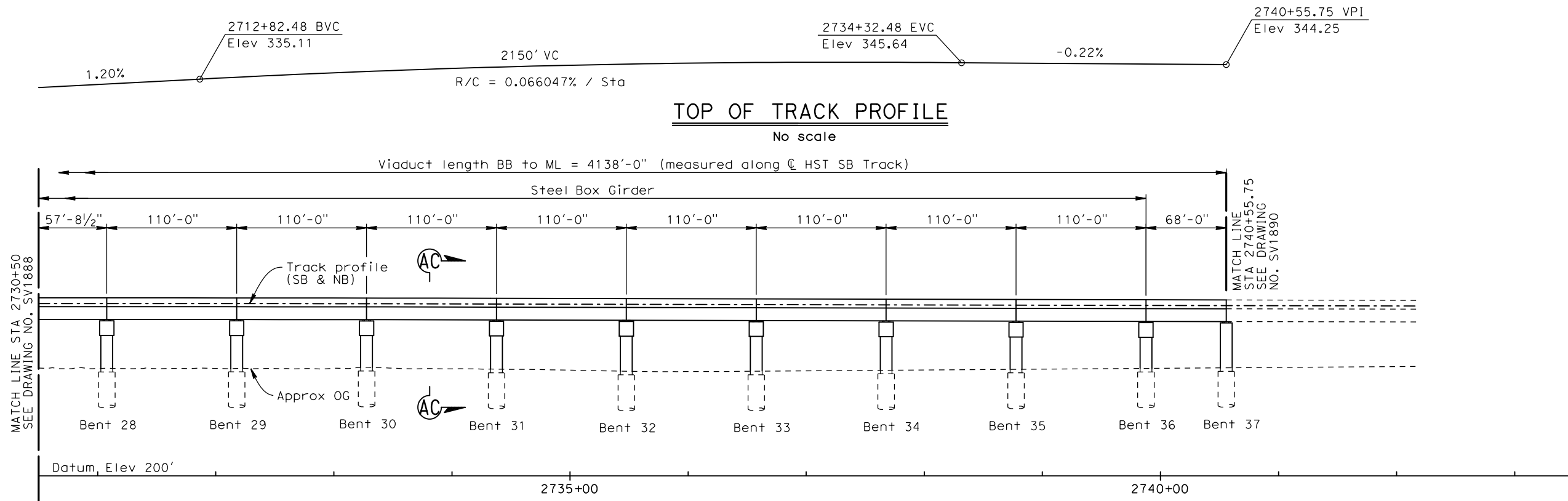


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 2717+50 TO STA 2730+50

CONTRACT NO. HSR06-007
DRAWING NO. SV1888
SCALE As shown
SHEET NO. OF

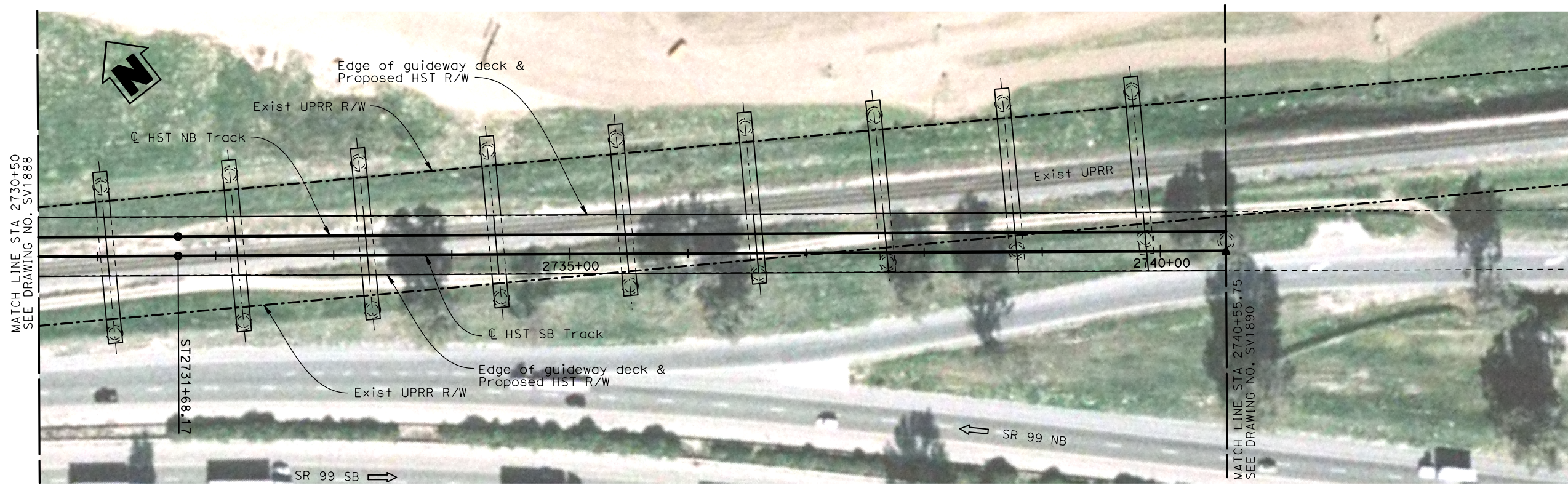


2/14/2012 7:51:02 AM \\usscr1fp001\Cadd\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Struct\Sheet\APS\HYBRID 24\15%\_cost\_reduction\_submittal\WF-SV-1889.dgn  
leec10



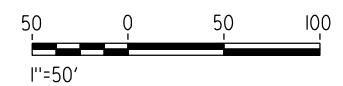
**TOP OF TRACK PROFILE**  
No scale

**DEVELOPED ELEVATION**  
1" = 50'



**PLAN**  
1" = 50'

- NOTES:
1. For General Notes, see Drawing No. SB0201.
  2. For Section AC-AC, see Drawing No. SV3102.
  3. Foundations shown are indicative subject to detail design and clarification of actual UPRR ROW.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. Barnard
DRAWN BY C. Lee
CHECKED BY H. Lee
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

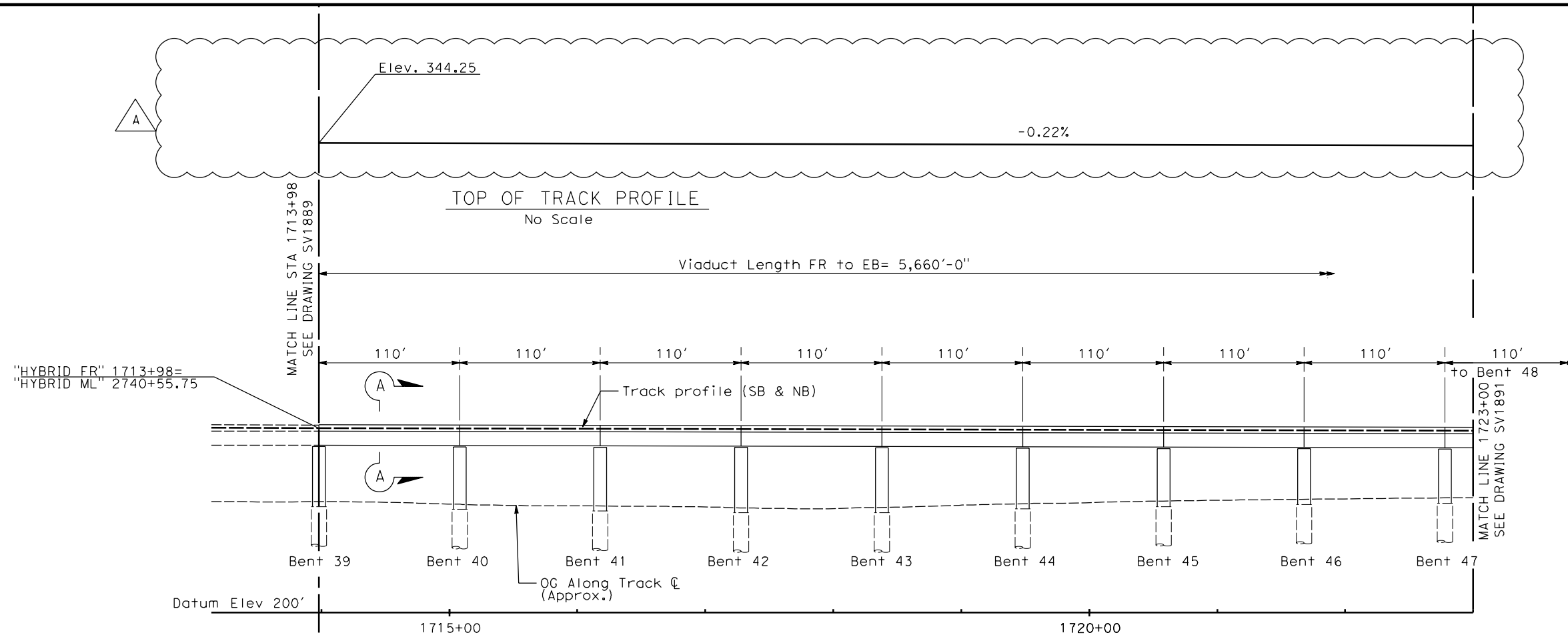
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 2730+50 TO STA 2740+55.75

CONTRACT NO. HSR06-007
DRAWING NO. SV1889
SCALE As shown
SHEET NO. OF





**NOTES:**  
For General Notes, see Drawing No. SB0201.  
For Section A-A, see Drawing No. SV3301.





**Note:**  
Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

**PLAN**  
1" = 50'

**ADDENDUM 5 - RFP HSR 11-16**



						DESIGNED BY D. Fredericks	15% DRAFT SUBMITTAL FOR INTERNAL USE ONLY	 Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811	 <i>CALIFORNIA</i> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO</b>  HYBRID MAIN LINE AVENUE 24 VIADUCT NO. 203 STA 1713+98 TO STA 1723+00			CONTRACT NO. HSR06-007		
					DRAWN BY P. Walker	DRAWING NO. SV1890-A5									
					CHECKED BY J. Showers	SCALE 1" = 50'									
					IN CHARGE J. Valsecchi	SHEET NO. OF									
A	2012-07	EC	TB	DM	REVISED FOR ADDENDUM 5	DATE 07/27/11	NOT FOR CONSTRUCTION								
REV	DATE	BY	CHK	APP	DESCRIPTION										

USERNAME => \$USER  
DGN FILE => \$REQUEST

NOTES:  
For General Notes, see  
Drawing No. SB0201.  
For Section A-A, see  
Drawing No. SV3301.  
Bent 59 eliminated.

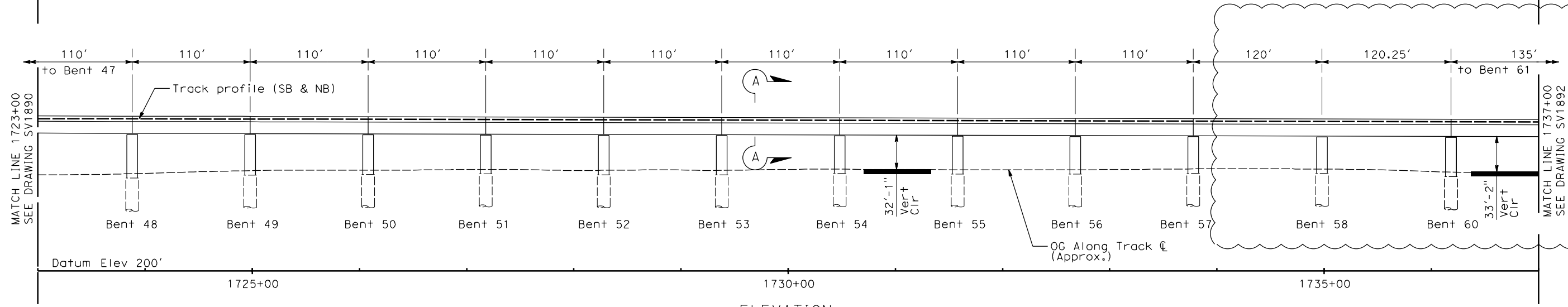
Elev. 344.25

A

-0.22%

TOP OF TRACK PROFILE  
No Scale

Viaduct Length FR to EB= 5,660'-0"



Note:  
Unless otherwise noted, a minimum distance  
of 25' between HST structure columns and  
UPRR ROW (to be verified) will be provided.

PLAN  
1" = 50'

ADDENDUM 3 - RFP HSR 11-16



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-06	EC	TB	DM	REVISED FOR ADDENDUM 3

DESIGNED BY  
D. Fredericks  
DRAWN BY  
P. Walker  
CHECKED BY  
J. Showers  
IN CHARGE  
J. Valsecchi  
DATE  
07/27/11

15% DRAFT  
SUBMITTAL  
FOR INTERNAL  
USE ONLY  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

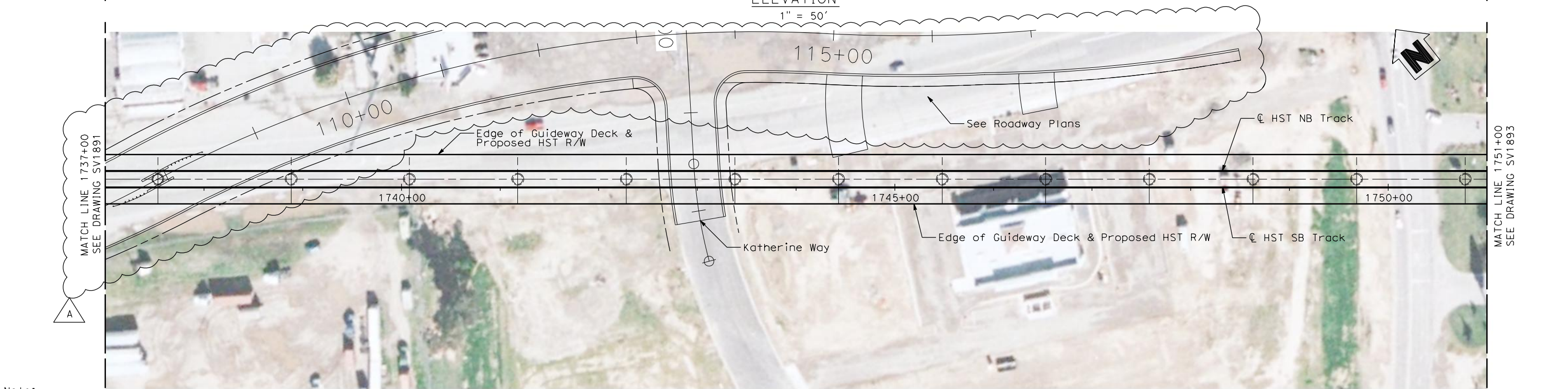
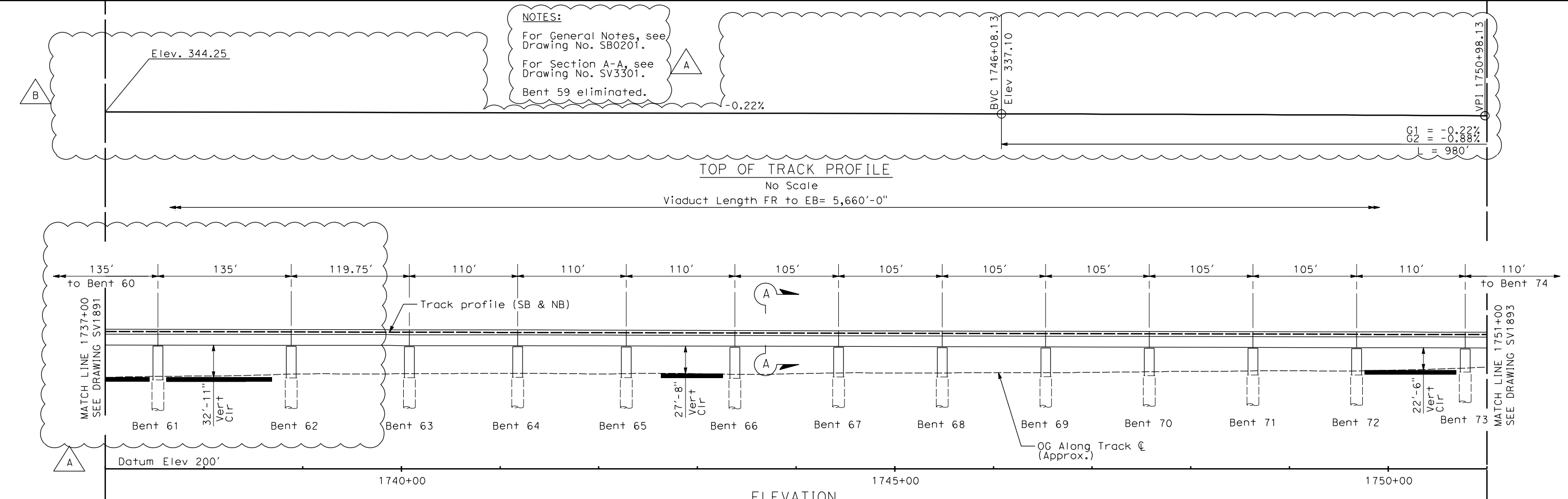


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
  
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 1723+00 TO STA 1737+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
SV1891-A3  
SCALE  
1" = 50'  
SHEET NO.  
OF

06/29/2012 ADDENDUM 3 - RFP HSR 11-16  
DATE PLOTTED => 6/12/2012  
TIME PLOTTED => 11:35:57 AM  
USERNAME => c:\snerose  
DGN FILE => ...\\MF-S-FS-A1HybridRGPE-00





**Note:**  
Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

**ADDENDUM 5 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION
B	2012-07	EC	TB	DM	REVISED FOR ADDENDUM 5
A	2012-06	EC	TB	DM	REVISED FOR ADDENDUM 3

DESIGNED BY  
D. Fredericks  
DRAWN BY  
P. Walker  
CHECKED BY  
J. Showers  
IN CHARGE  
J. Valsecchi  
DATE  
07/27/11

**15% DRAFT  
SUBMITTAL  
FOR INTERNAL  
USE ONLY**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

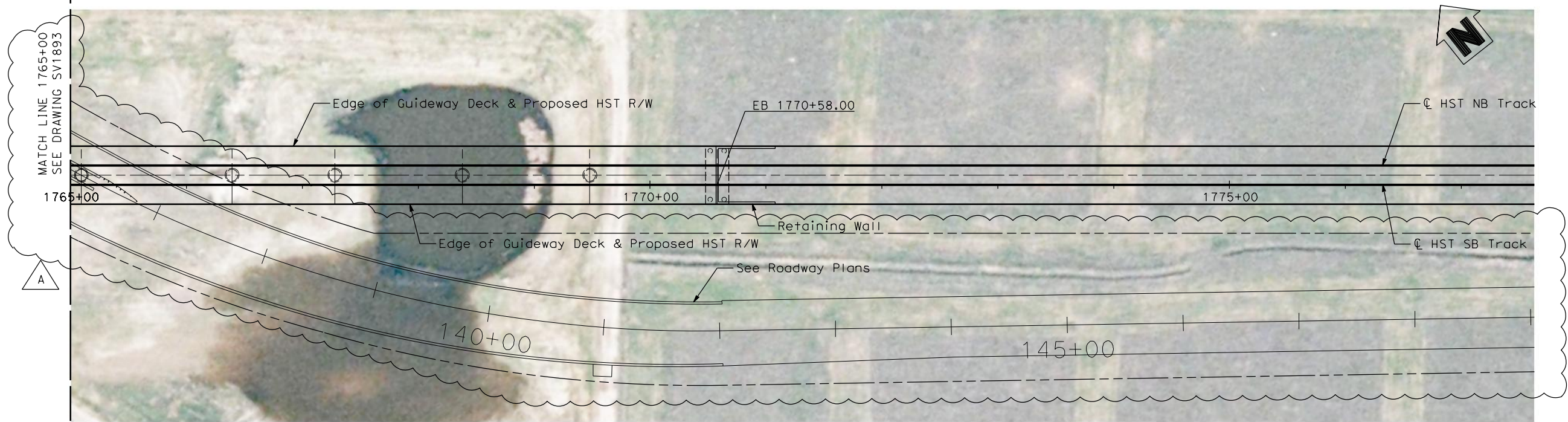
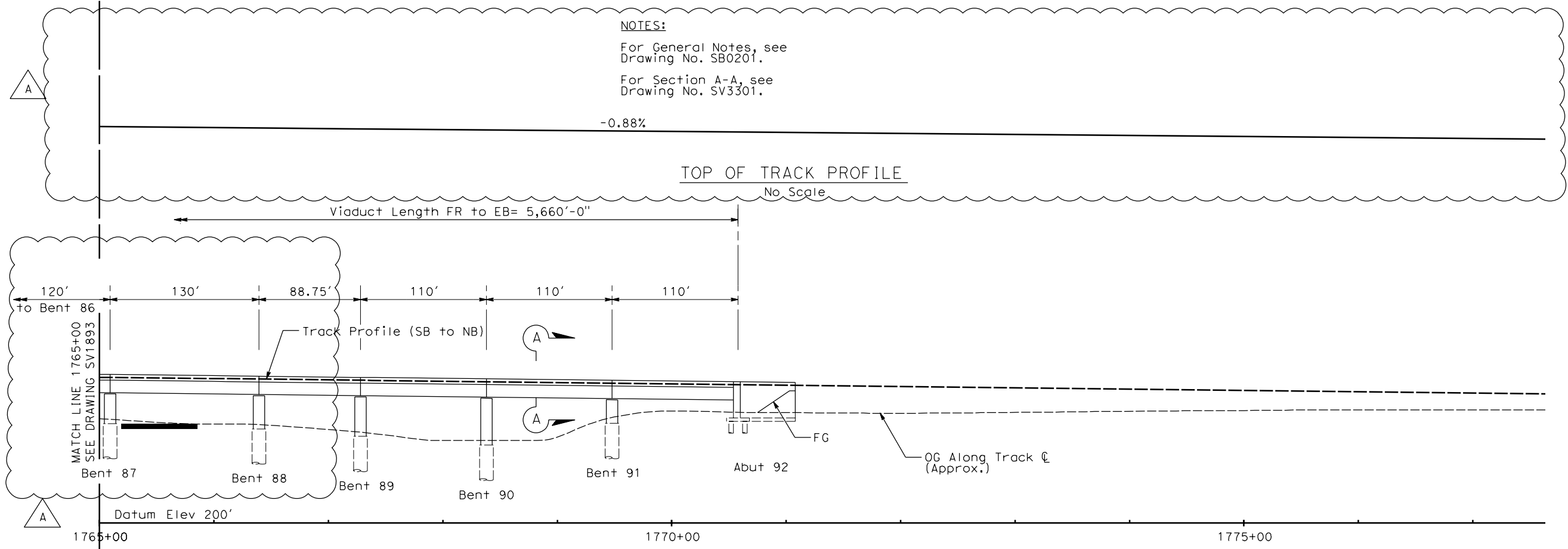
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 1737+00 TO STA 1751+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
SV1892-B5  
SCALE  
1" = 50'  
SHEET NO.  
OF

USERNAME => \$USER  
DGN FILE => \$REQUEST







Note:  
Unless otherwise noted, a minimum distance  
of 25' between HST structure columns and  
UPRR ROW (to be verified) will be provided.

PLAN  
1" = 50'

ADDENDUM 5 - RFP HSR 11-16



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-07	EC	TB	DM	REVISED FOR ADDENDUM 5

DESIGNED BY  
D. Fredericks  
DRAWN BY  
P. Walker  
CHECKED BY  
J. Showers  
IN CHARGE  
J. Valsecchi  
DATE  
07/27/11

15% DRAFT  
SUBMITTAL  
FOR INTERNAL  
USE ONLY  
  
NOT FOR  
CONSTRUCTION

Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

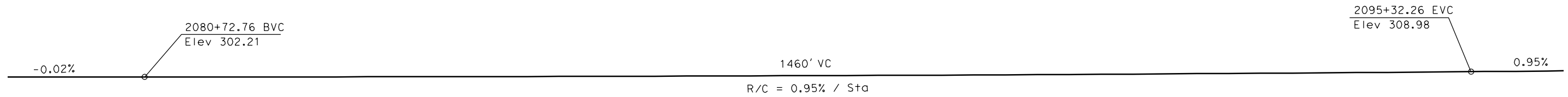
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

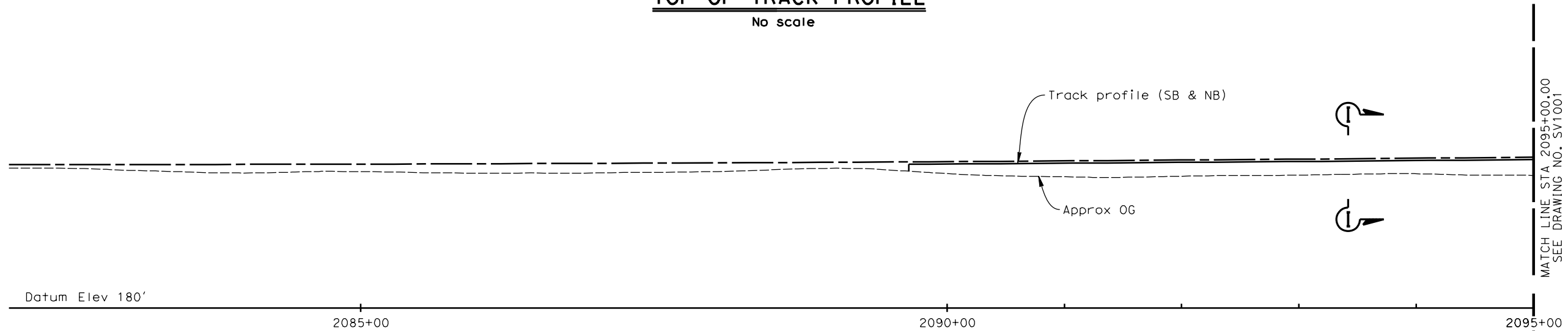
HYBRID MAIN LINE  
AVENUE 24  
VIADUCT NO. 203  
STA 1765+00 TO STA 1772+78

CONTRACT NO.	HSR06-007
DRAWING NO.	SV1894-A5
SCALE	1" = 50'
SHEET NO.	OF

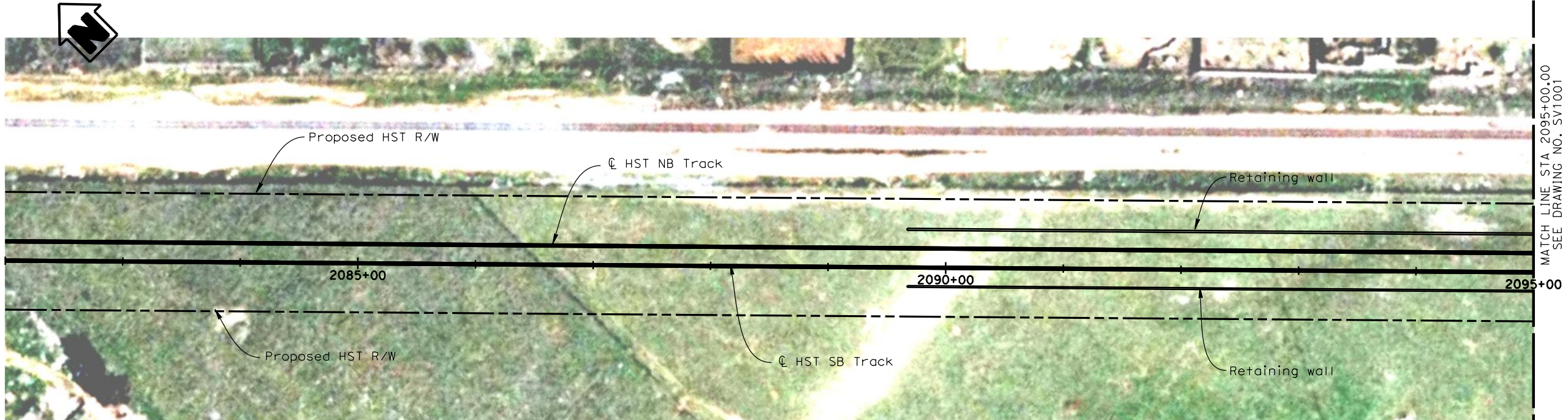
c:\snerose 2/16/2012 11:28:40 AM \\usscrifp001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SV-2000.dgn



**TOP OF TRACK PROFILE**  
No scale



**ELEVATION**  
1" = 50'



**PLAN**  
1" = 50'

- NOTES:
1. For General Notes, see Drawing No. SB0201.
  2. For Section I-I, see Drawing No. SV3004.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
VIADUCT NO. 501  
STA 2082+00.00 TO STA 2095+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2000
SCALE As shown
SHEET NO. OF



c:\user\fp001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\Cadd\Struct\Sheet\SR145\WF-SV-2001.dgn 2/16/2012 11:27:45 AM

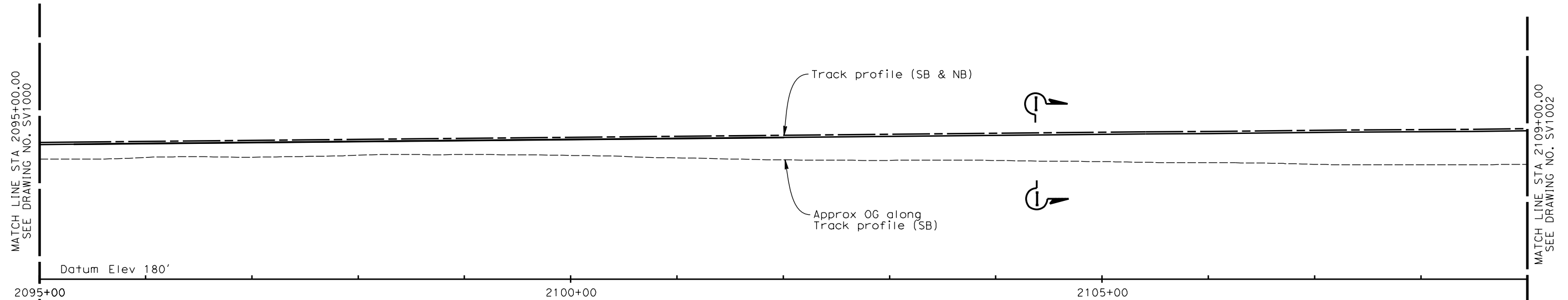
2095+32.26 EVC  
Elev 308.98

2105+40.95 BVC  
Elev 318.56

0.95%

### TOP OF TRACK PROFILE

No scale

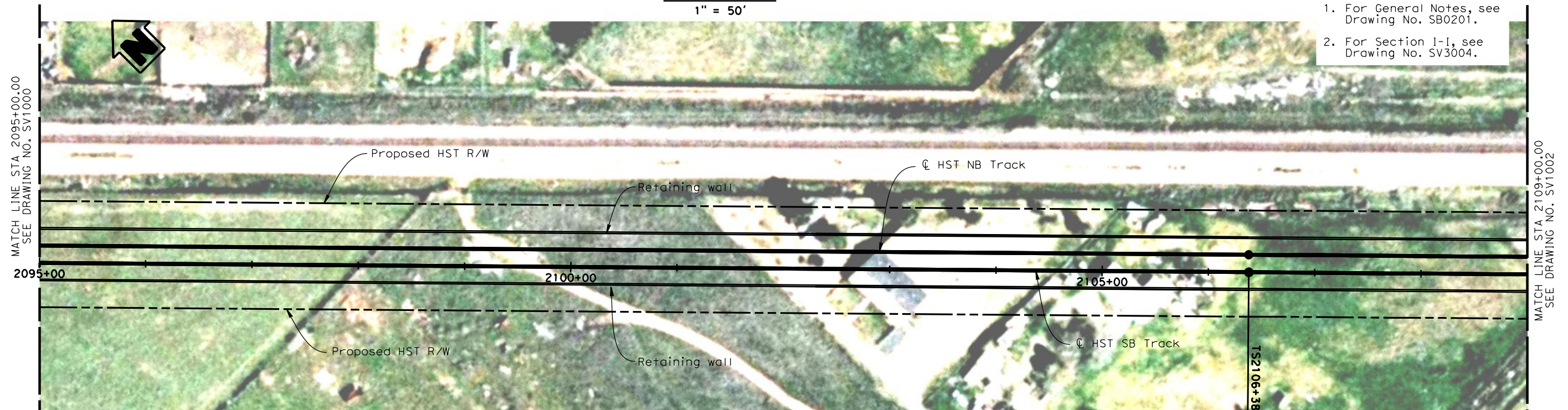


### ELEVATION

1" = 50'

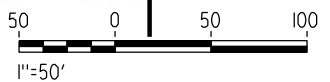
#### NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.



### PLAN

1" = 50'



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**

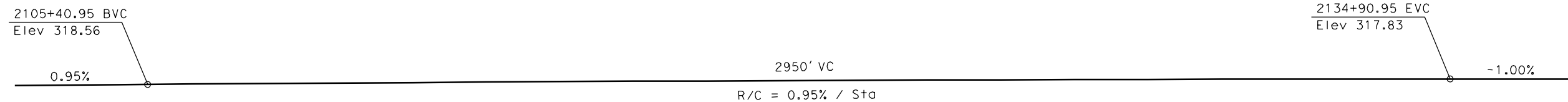


**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
VIADUCT NO. 501  
STA 2095+00.00 TO STA 2109+00.00

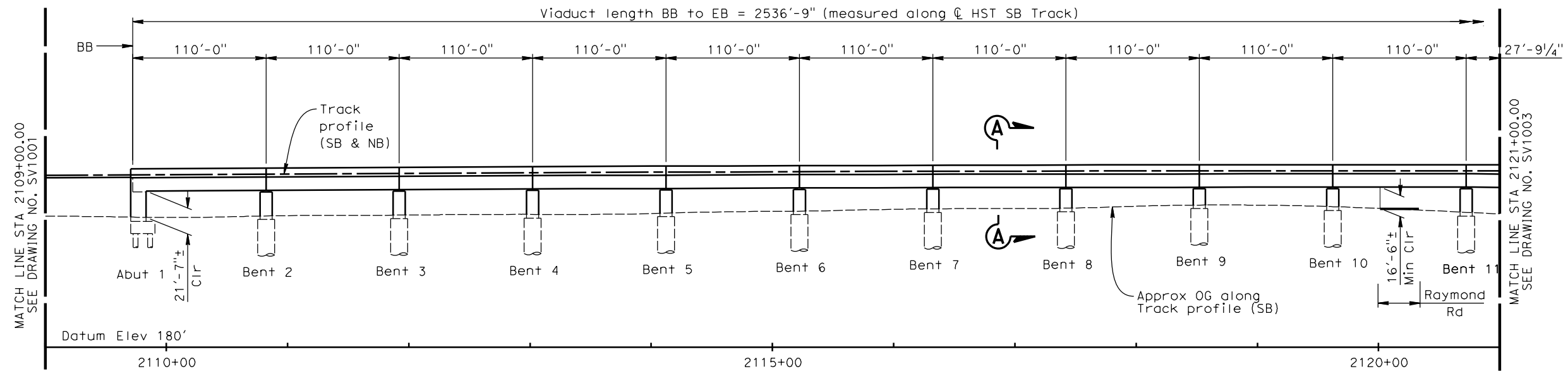
CONTRACT NO. HSR06-007
DRAWING NO. SV2001
SCALE As shown
SHEET NO. OF





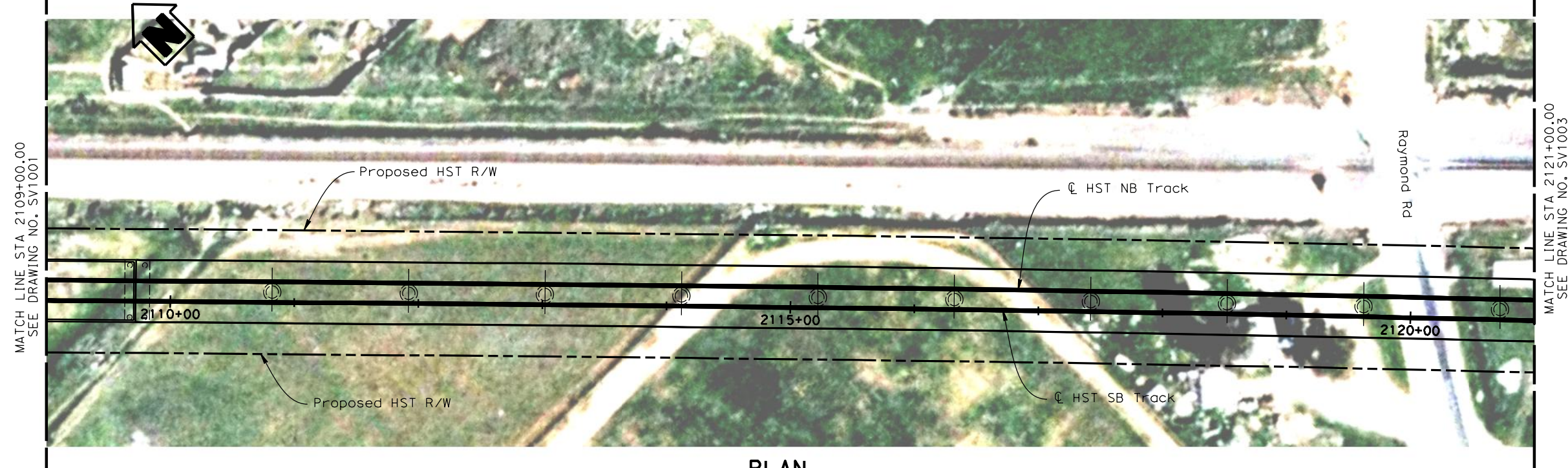
**TOP OF TRACK PROFILE**

No scale



**ELEVATION**

1" = 50'

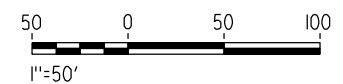


**PLAN**

1" = 50'

**NOTES:**

1. For General Notes, see Drawing No. SB0201.
2. For Section A-A, see Drawing No. SV3001.



c:\user\fp001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\Cadd\Struct\Sheet\SR145\WF-SV-2002.dgn 2/16/2012 11:29:49 AM

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY T. BARNARD
IN CHARGE A. Boone
DATE 02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
VIADUCT NO. 501  
STA 2109+00.00 TO STA 2121+00.00

CONTRACT NO. HSR06-007
DRAWING NO. SV2002
SCALE As shown
SHEET NO. OF



CONTRACT NO.	HSR06-007
DRAWING NO.	SV2003
SCALE	As shown
SHEET NO.	OF



c:\user\fp001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SV-2004.dgn 2/16/2012 11:31:20 AM

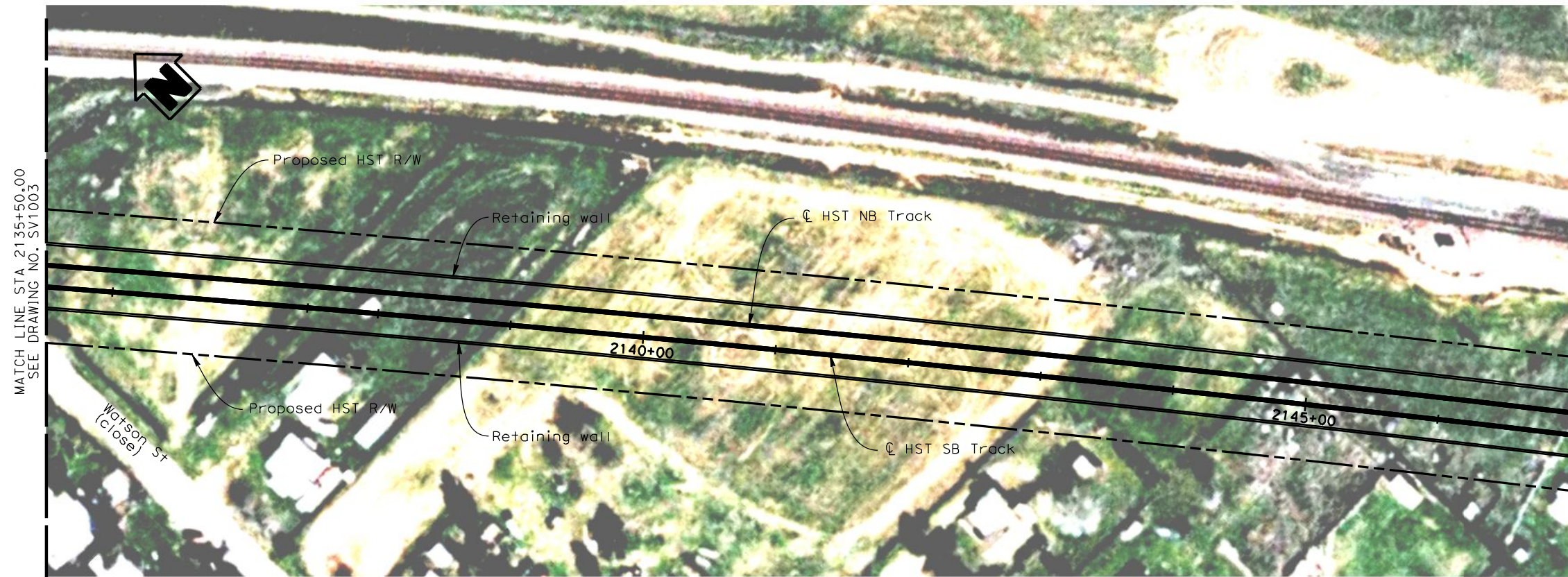
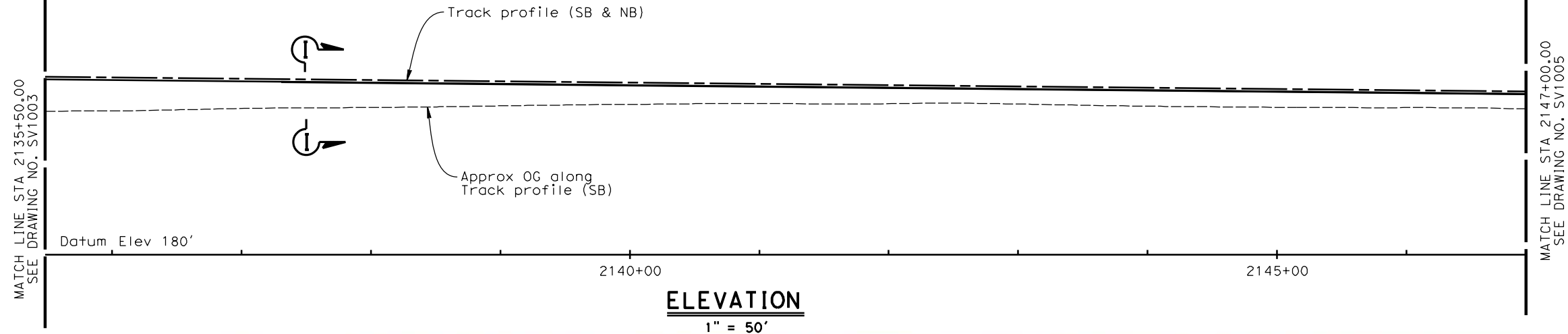
2134+90.95 EVC  
Elev 317.83

2148+13.44 BVC  
Elev 304.60

-1.00%

### TOP OF TRACK PROFILE

No scale



### PLAN

1" = 50'

#### NOTES:

1. For General Notes, see Drawing No. SB0201.
2. For Section I-I, see Drawing No. SV3004.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
H. LEE  
DRAWN BY  
E. CISNEROS  
CHECKED BY  
T. BARNARD  
IN CHARGE  
A. Boone  
DATE  
02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

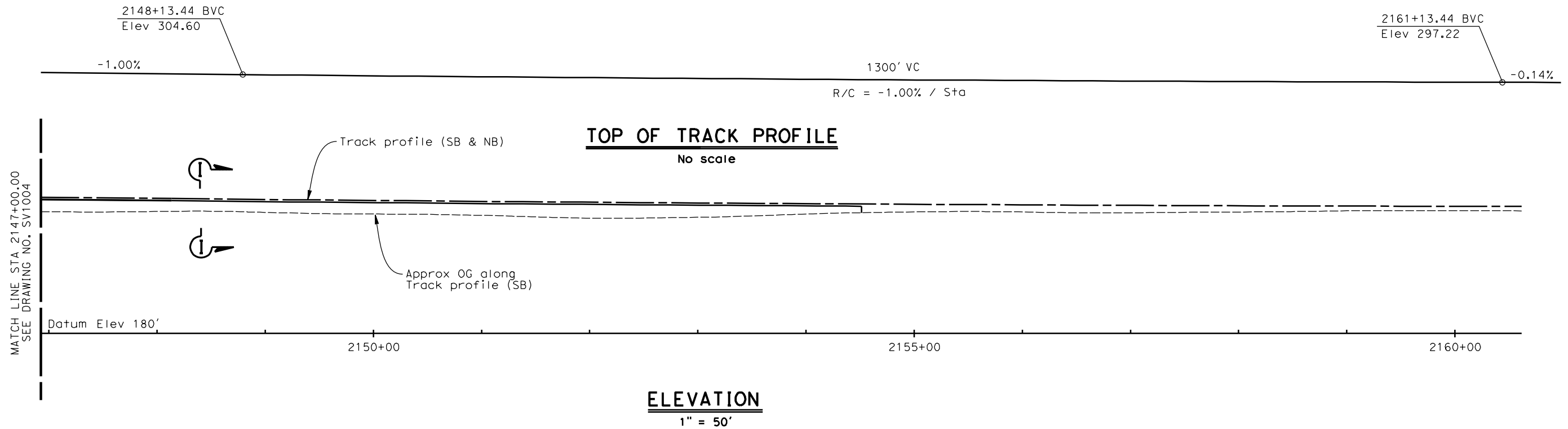


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
VIADUCT NO. 501  
STA 2135+50.00 TO STA 2147+00.00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
SV2004  
SCALE  
As shown  
SHEET NO.  
OF



cisnerose 2/16/2012 11:32:08 AM \\usscri1p001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\SR145\WF-SV-2005.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
H. LEE  
DRAWN BY  
E. CISNEROS  
CHECKED BY  
T. BARNARD  
IN CHARGE  
A. Boone  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

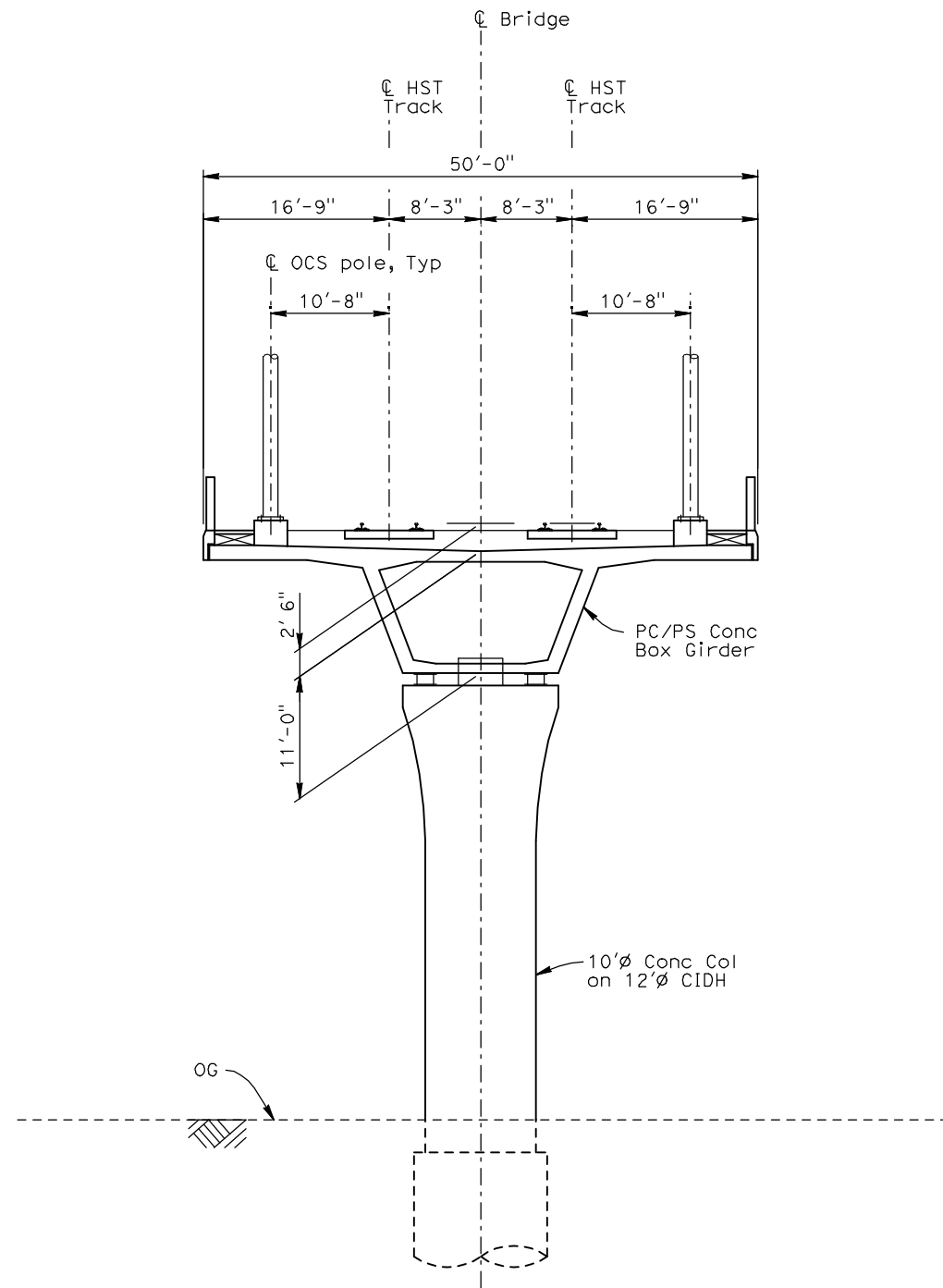
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
VIADUCT NO. 501  
STA 2147+00.00 TO STA 2160+00.00

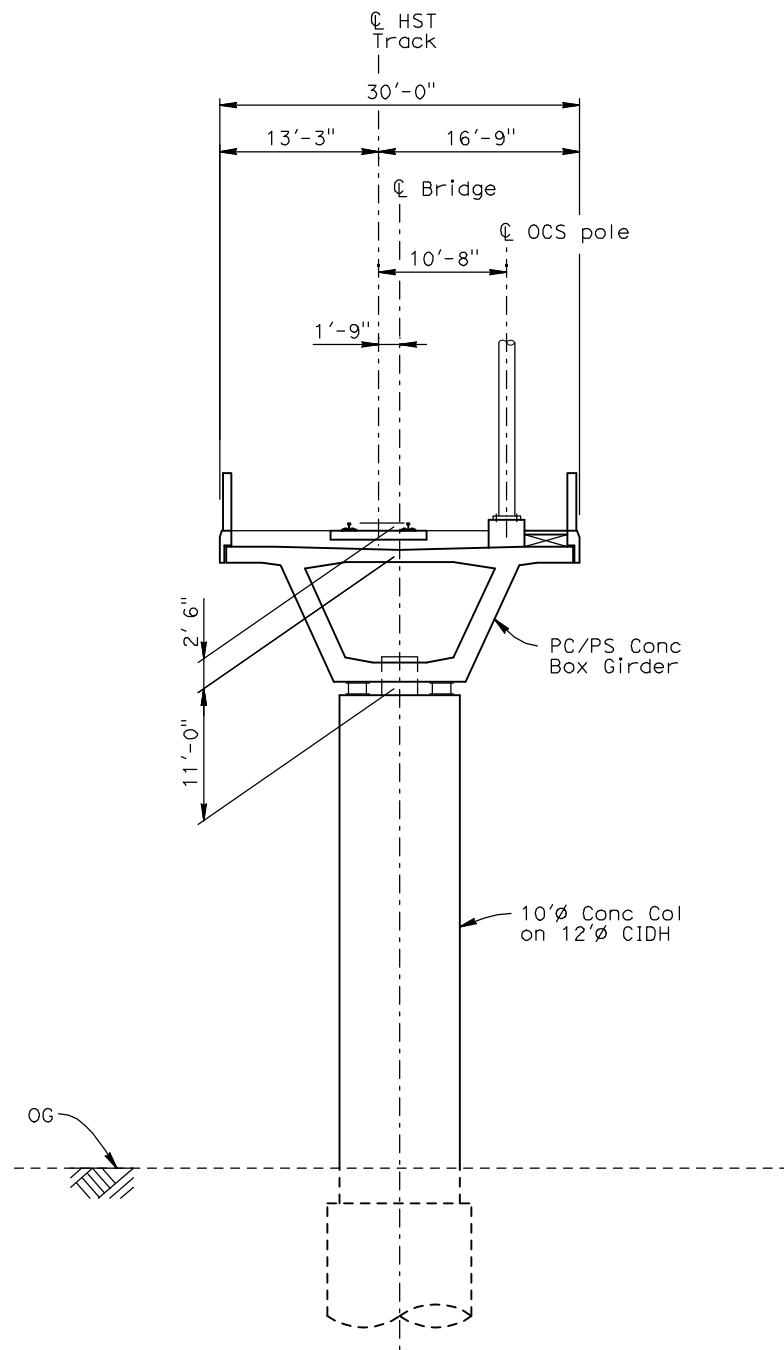
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
SV2005  
SCALE  
As shown  
SHEET NO.  
OF

4/29/2011 9:51:00 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\at\15%\_cost\_reduction\_submittal\ave 21\WF-SV-3001.dgn LeeC10



TYPICAL SECTION A  
FOR DOUBLE TRACK PC/PS CONCRETE BOX GIRDER

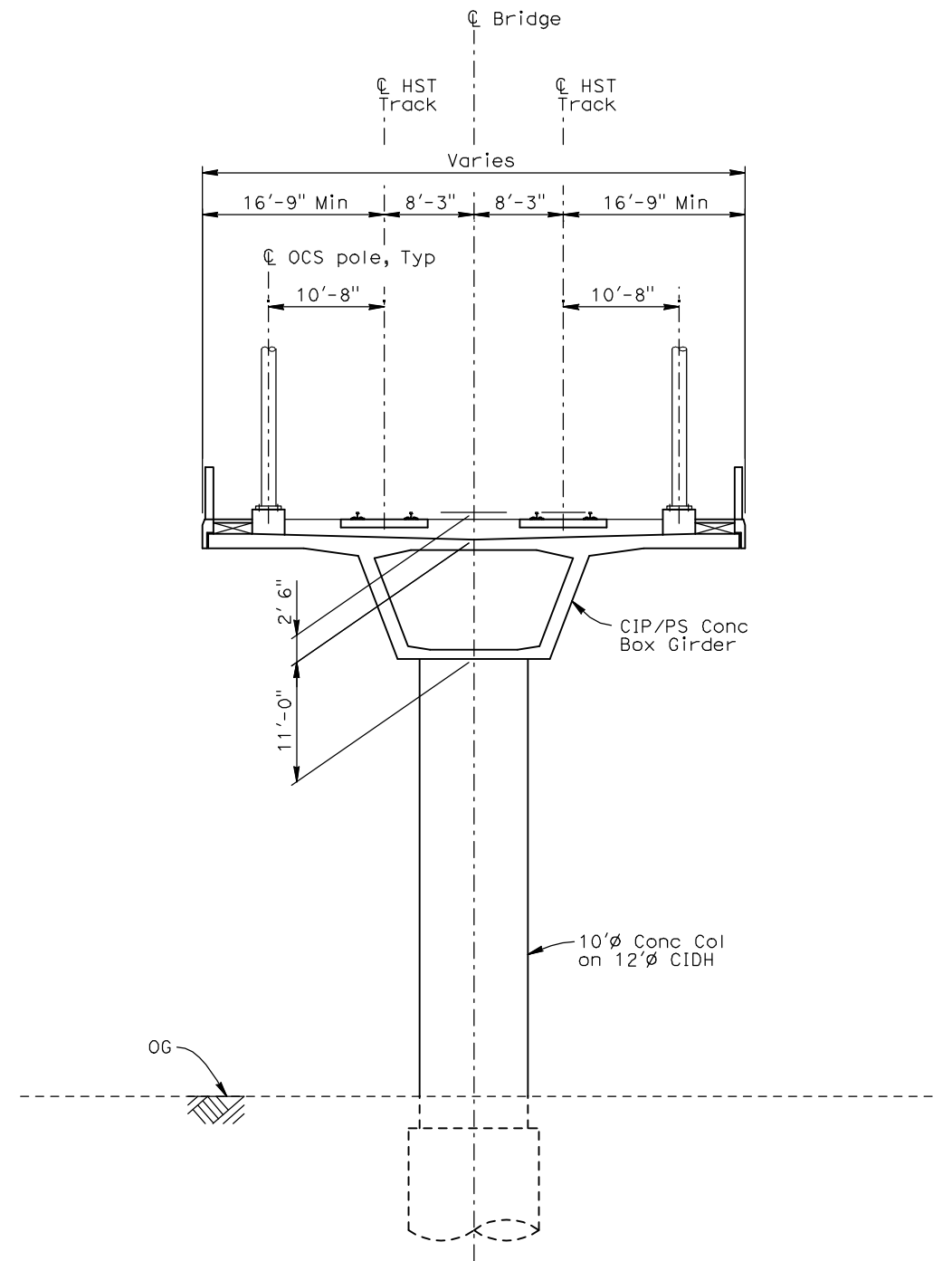
1/8" = 1'-0"



TYPICAL SECTION B  
FOR SINGLE TRACK PC/PS CONCRETE BOX GIRDER

1/8" = 1'-0"

TYPICAL SECTION K SIMILAR  
(Section K similar but mirrored about C of bridge)



TYPICAL SECTION C  
FOR DOUBLE TRACK CIP CONCRETE BOX GIRDER

1/8" = 1'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

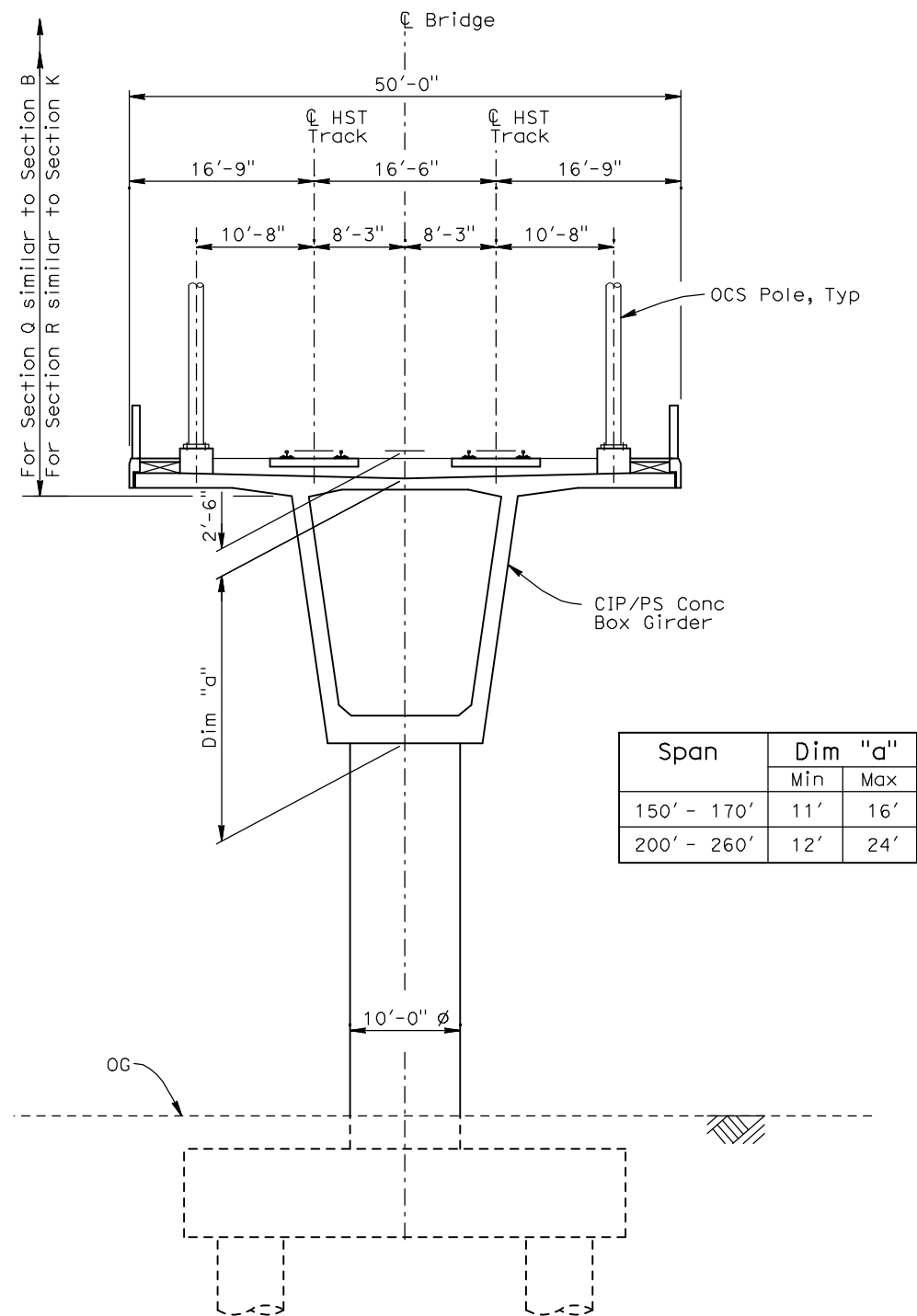


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENTS  
AVENUE 21 AND 24  
TYPICAL SECTIONS  
SHEET 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3001
SCALE As shown
SHEET NO. OF



4/29/2011 9:51:02 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\at\15%\_cost\_reduction\_submittal\ave 21\WF-SV-3002.dgn LeeC10



Span	Dim "a"	
	Min	Max
150' - 170'	11'	16'
200' - 260'	12'	24'

TYPICAL SECTION D  
FOR BALANCED CANTILEVER CONSTRUCTION

$\frac{1}{8}" = 1'-0"$

TYPICAL SECTION Q AND R SIMILAR  
(Section Q and R are single track )

REV	DATE	BY	CHK	APP	DESCRIPTION

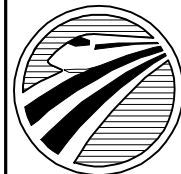
DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



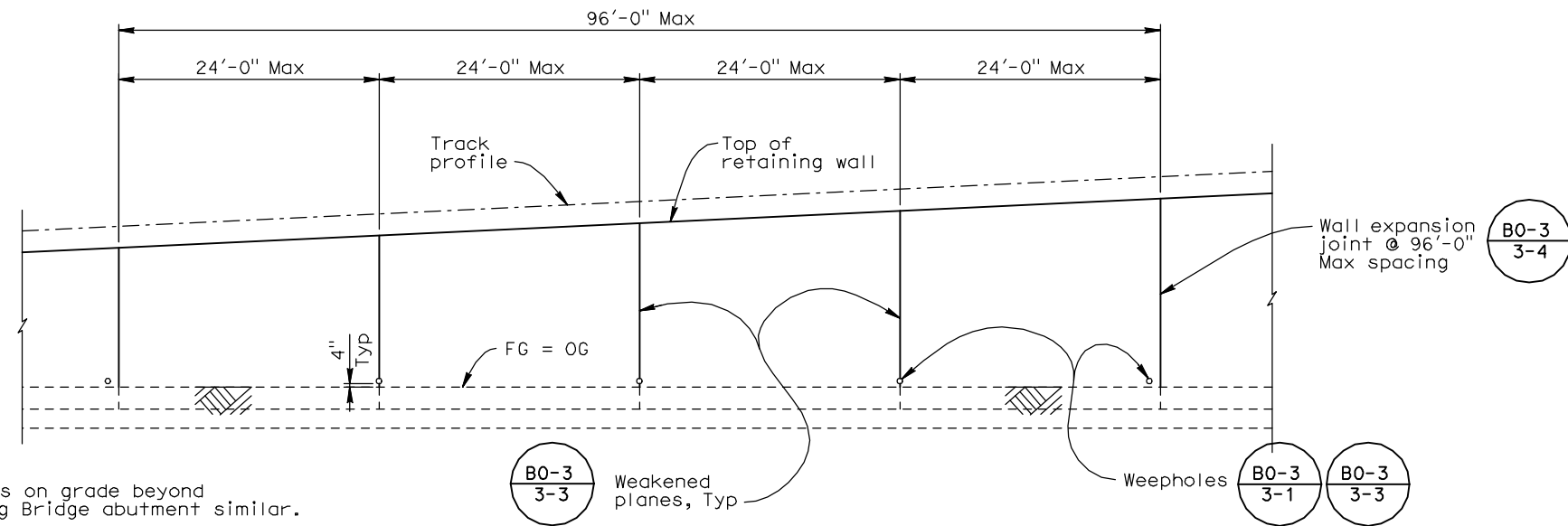
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

ALIGNMENTS  
AVENUE 21 AND 24  
TYPICAL SECTIONS  
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3002
SCALE As shown
SHEET NO. OF

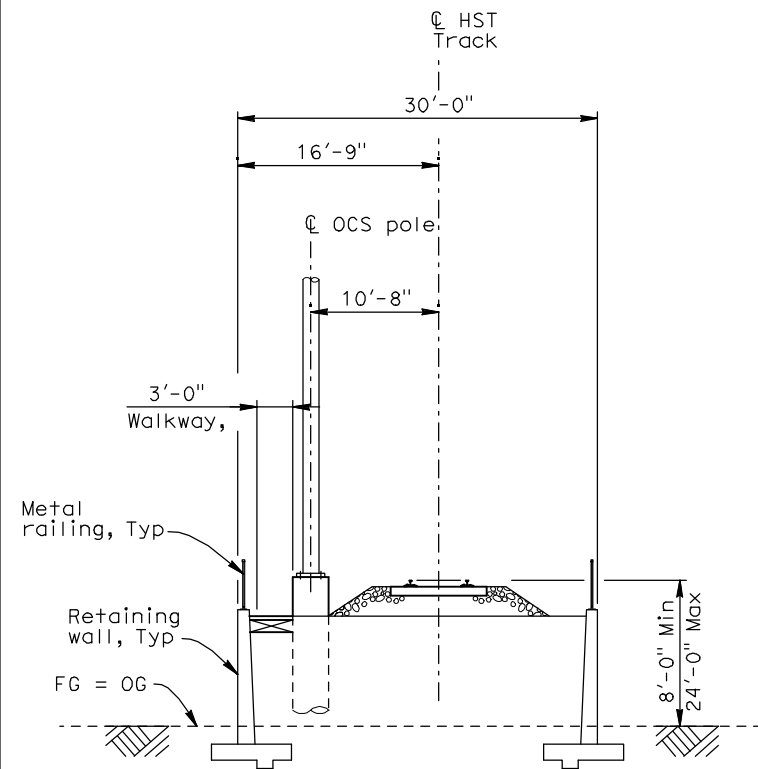
4/29/2011 9:51:07 AM I:\chsr\60022962\Task-02\_merced-fresno\cadd\struct\sheet\aps\al\15%\_cost\_reduction\_submittal\ave 21\WF-SV-3004.dgn LeeC10



NOTE:  
1. Retaining walls on grade beyond Water Crossing Bridge abutment similar.

### TYPICAL ELEVATION ON RETAINING WALLS AT RETAINED FILL

1/8" = 1'-0"  
(Metal railing not shown)

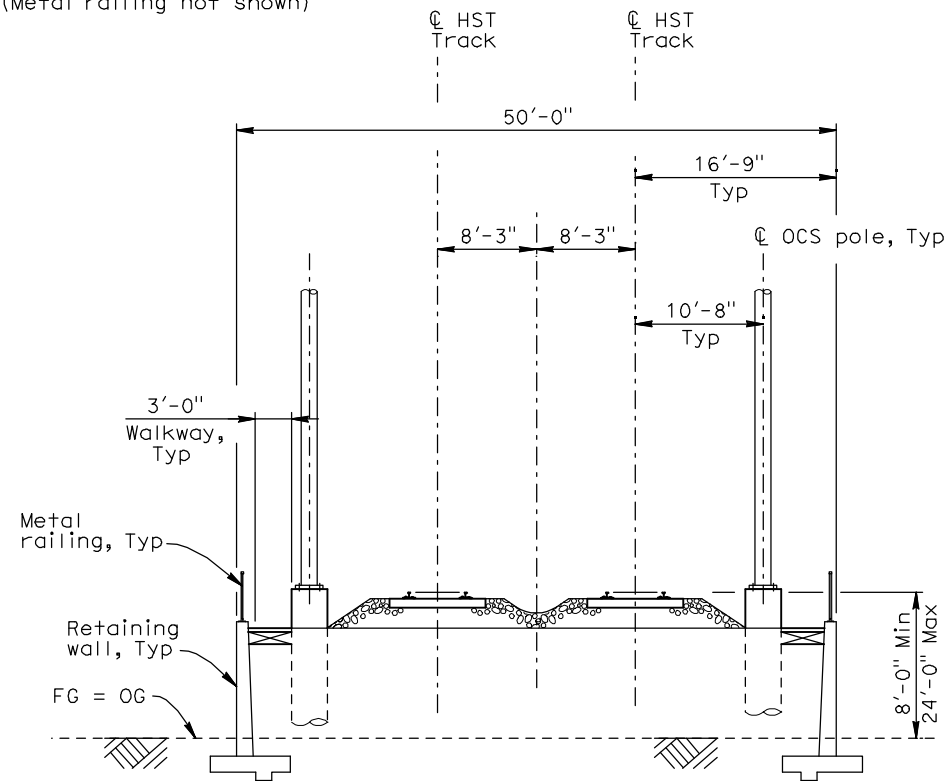


TYPICAL SECTION H  
RETAINING WALLS - ONE TRACK

1/8" = 1'-0"

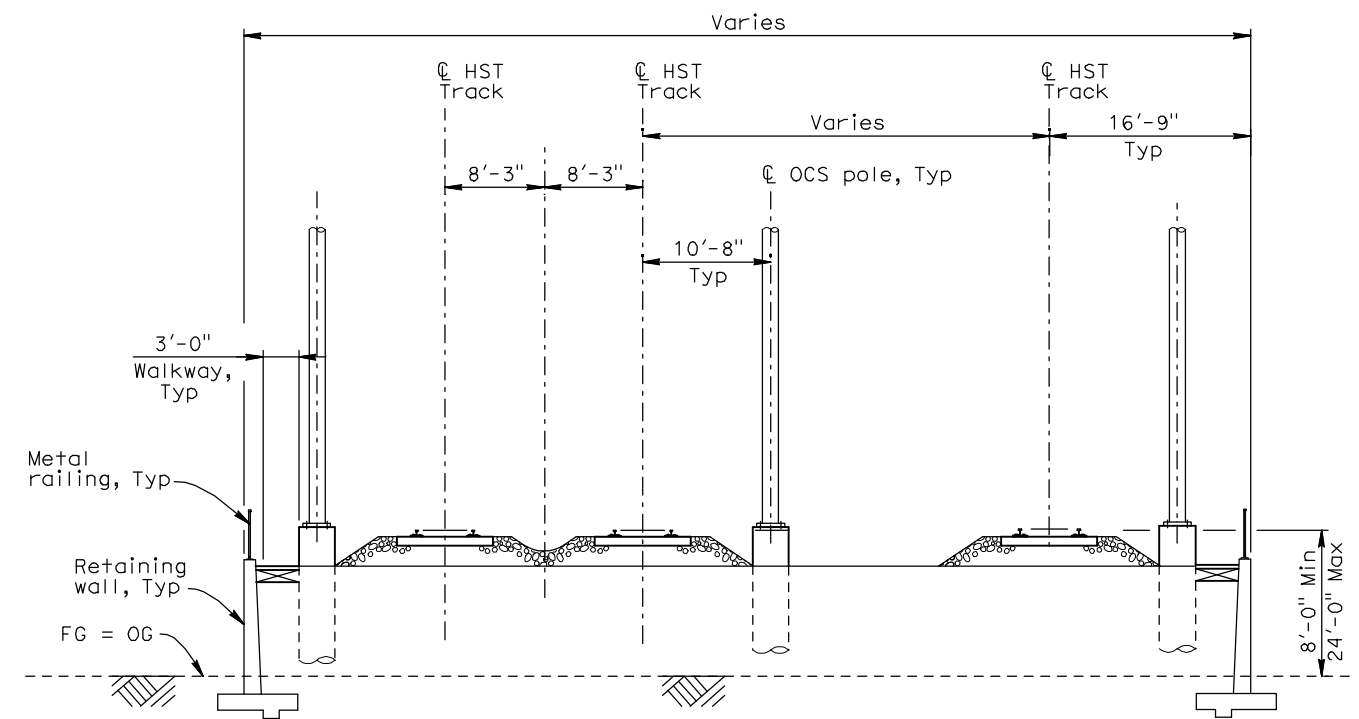
### TYPICAL SECTION M SIMILAR

(Section M similar but mirrored about C of HST Track)



TYPICAL SECTION I  
RETAINING WALLS - TWO TRACKS

1/8" = 1'-0"



TYPICAL SECTION J  
RETAINING WALLS - THREE TRACKS

1/8" = 1'-0"

### TYPICAL SECTION N SIMILAR

(Section N similar but mirrored)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

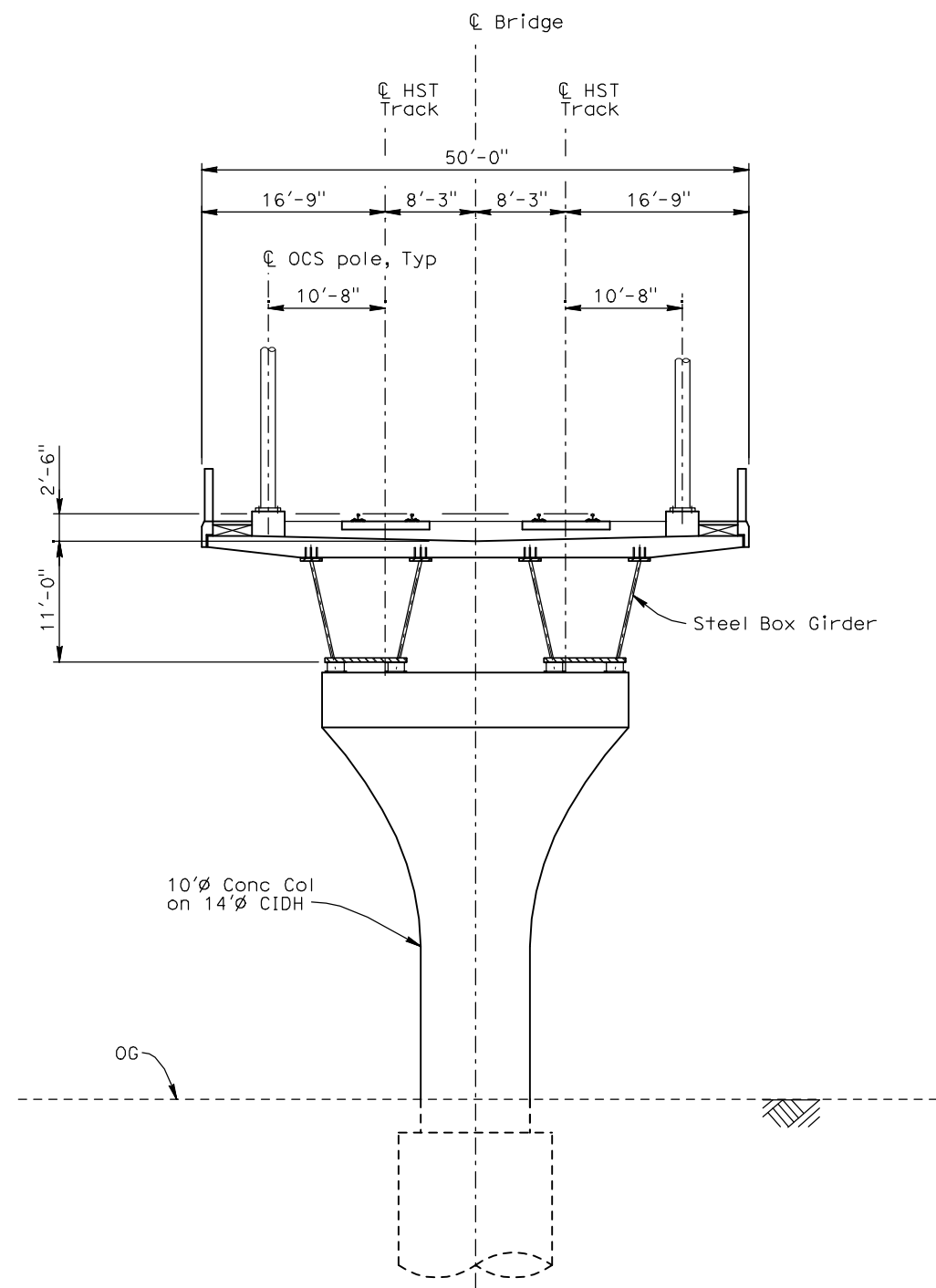


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENTS  
AVENUE 21 AND 24  
TYPICAL SECTIONS  
SHEET 4

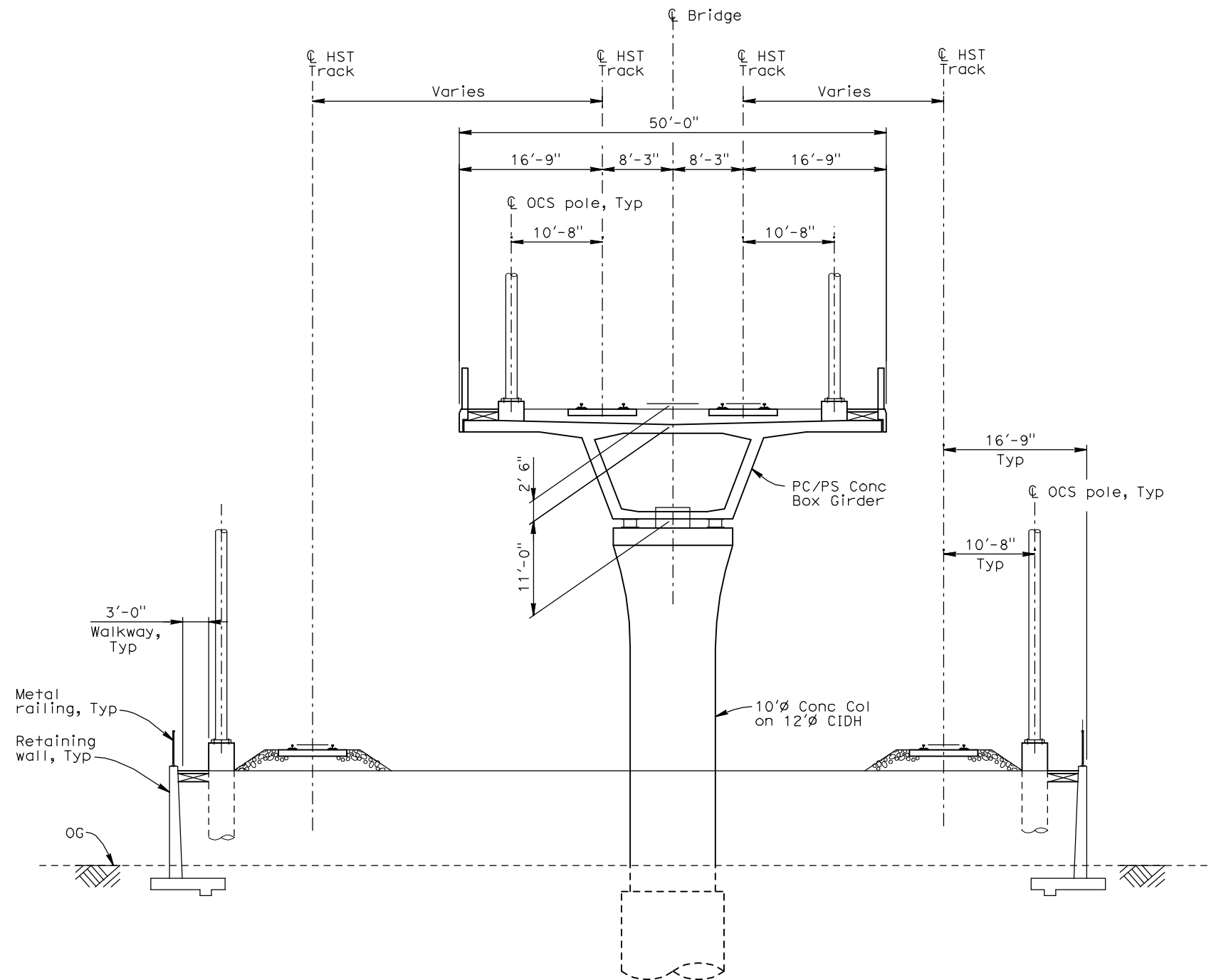
CONTRACT NO. HSR06-007
DRAWING NO. SV3004
SCALE As shown
SHEET NO. OF



4/29/2011 9:51:10 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\al\15%\_cost\_reduction\_submittal\ave 21\WF-SV-3005.dgn



TYPICAL SECTION O  
FOR DOUBLE TRACK STEEL BOX GIRDER  
1/8" = 1'-0"



TYPICAL SECTION P  
FOR DOUBLE TRACK PC/PS CONCRETE BOX GIRDER W/ RETAINING WALLS  
1/8" = 1'-0"

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

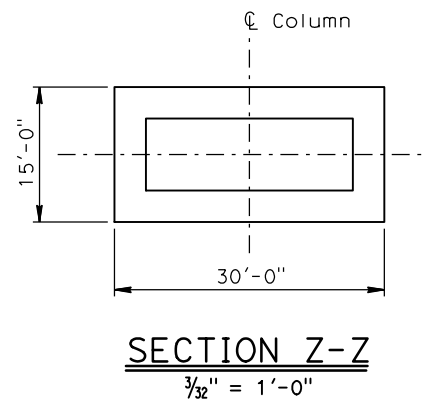
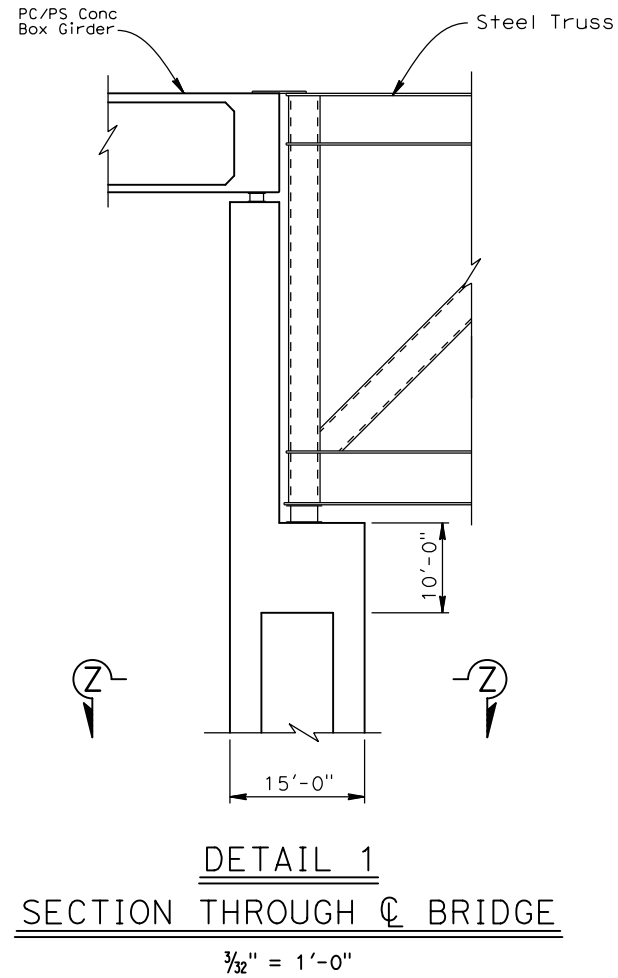
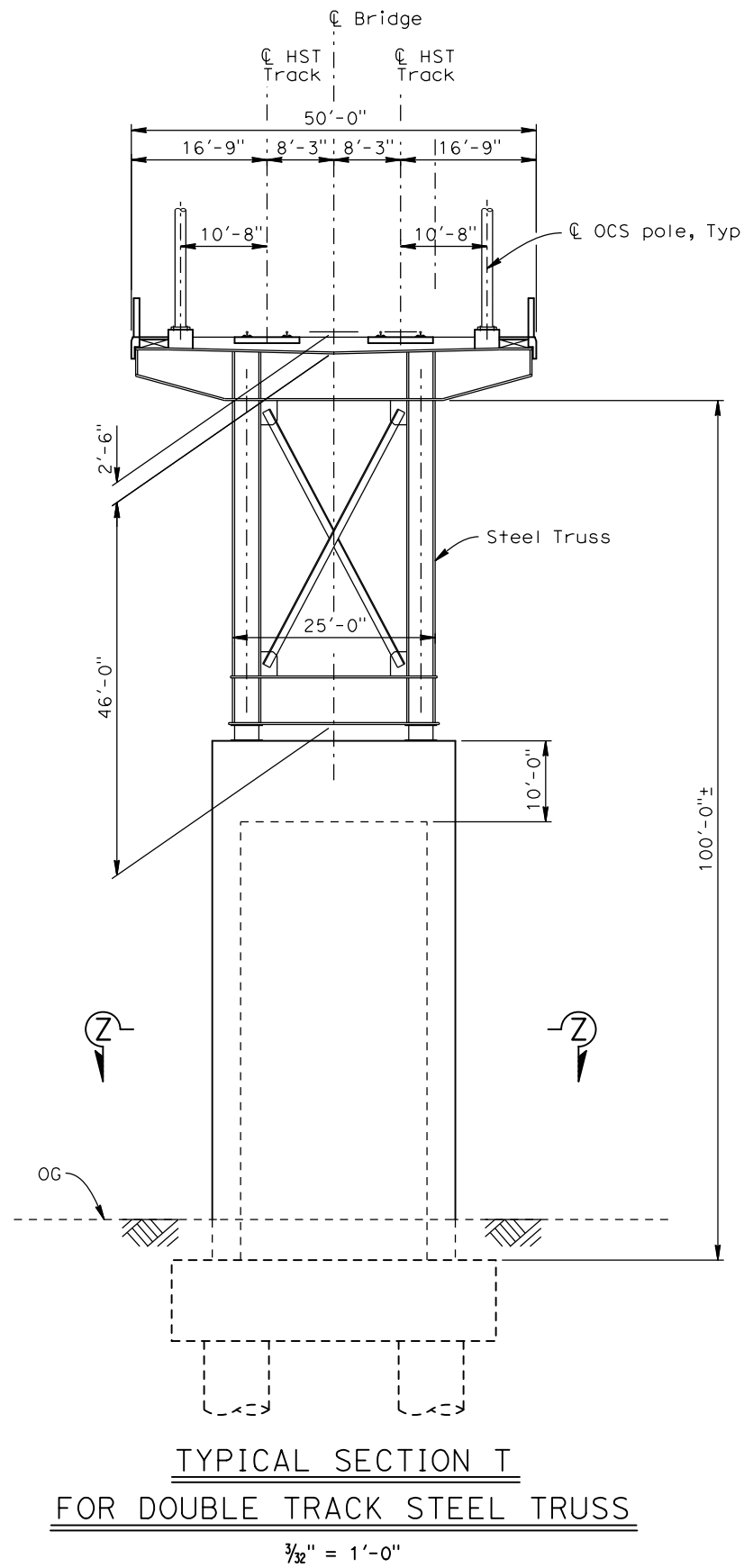
**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENTS  
AVENUE 21 AND 24  
TYPICAL SECTIONS  
SHEET 5

CONTRACT NO. HSR06-007
DRAWING NO. SV3005
SCALE As shown
SHEET NO. OF

I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Struct\Sheet\HYBRID\_24\15%\_cost\_reduction\_submittal\MF-SV-3006\_HB24.dgn 2/23/2012 9:03:47 AM lsec10



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY C. LEE
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 02/22/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



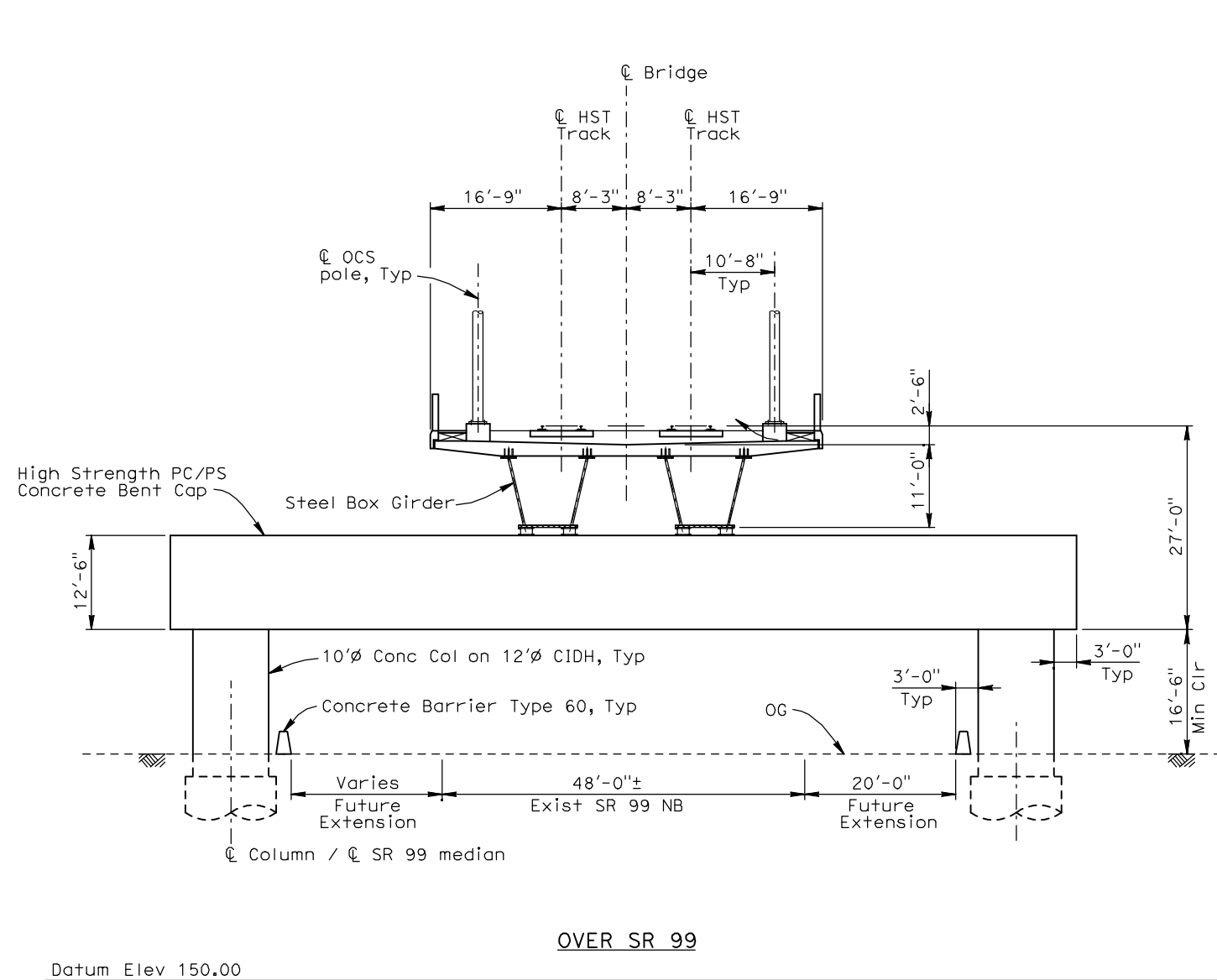
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

ALIGNMENTS  
AVENUE 21 AND 24  
TYPICAL SECTIONS  
SHEET 6

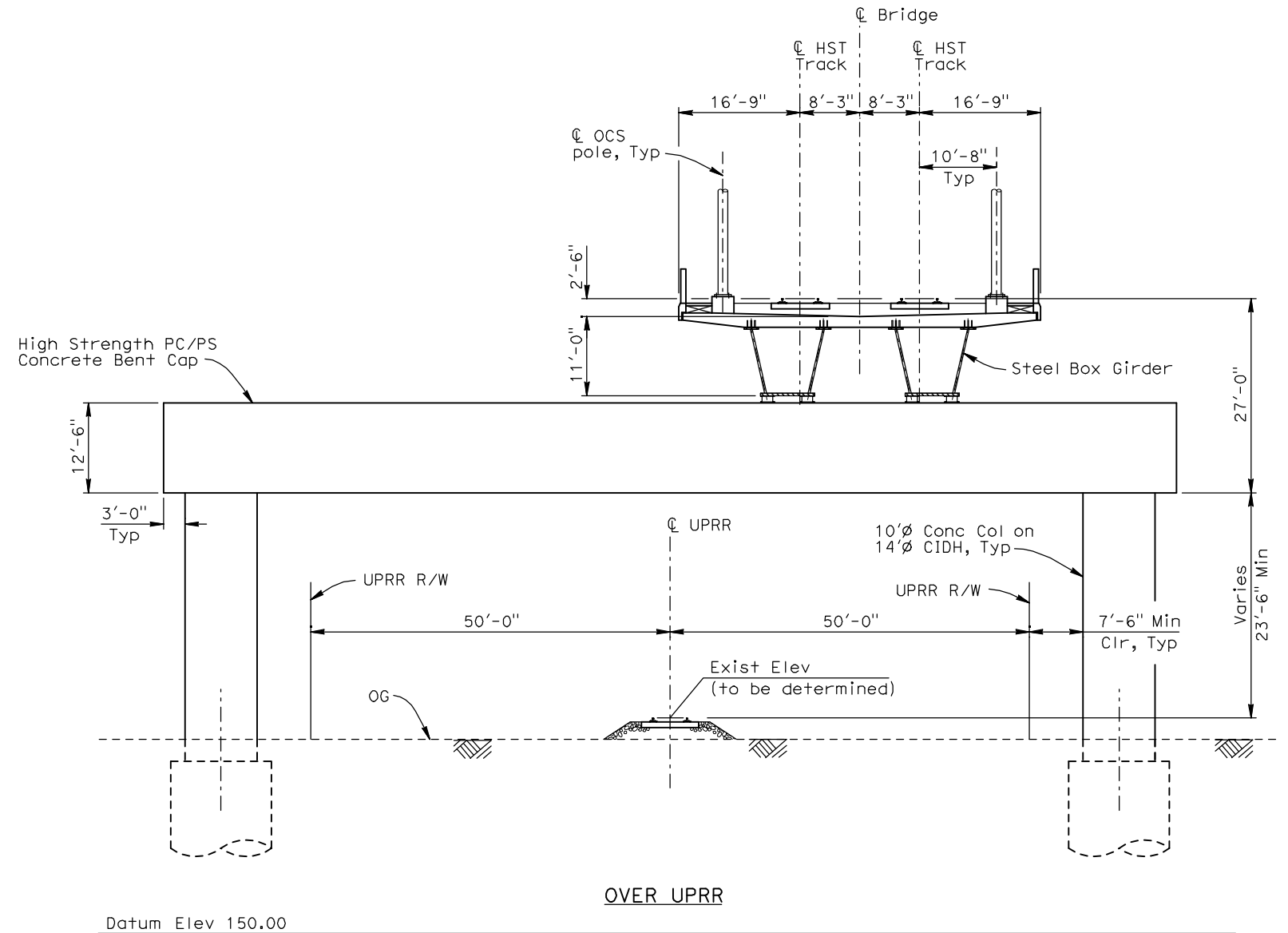
CONTRACT NO. HSR06-007
DRAWING NO. SV3006
SCALE As shown
SHEET NO. OF



4/30/2011 8:04:38 AM I:\chsr\60022962\Task-02\_merced-fresno\cadd\struct\sheet\aps\A1\15%\_cost\_reduction\_submittal\Ave 21\WF-SV-3102.dgn LeeC10



**SECTION AB**  
 $\frac{3}{32}'' = 1'-0''$



**SECTION AC**  
 $\frac{3}{32}'' = 1'-0''$

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

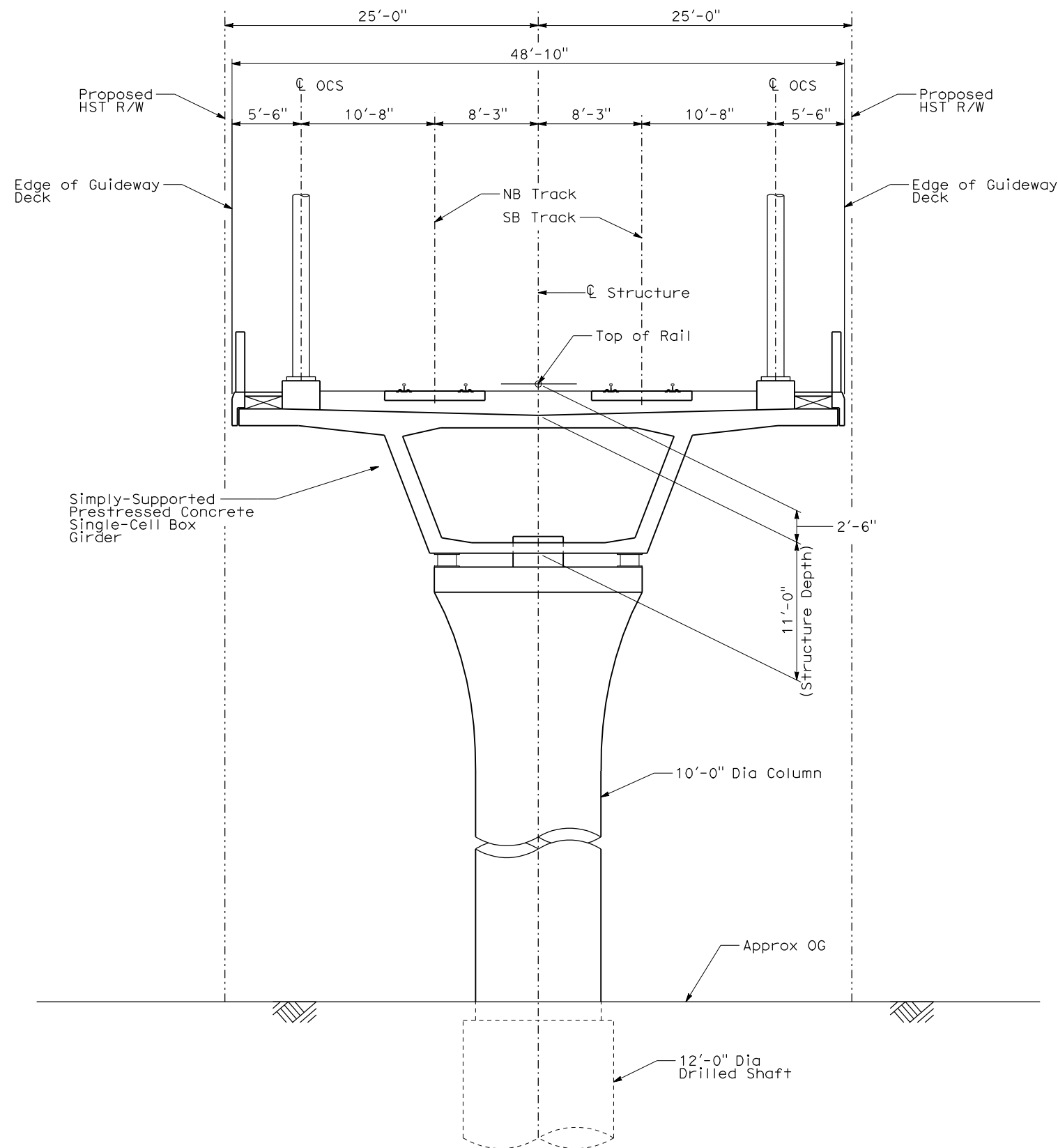
**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
ALIGNMENT BNSF  
AVENUE 21 AND 24  
SECTIONS  
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3102
SCALE As shown
SHEET NO. OF



**Note:**

Unless otherwise noted, a minimum distance of 25' between HST structure columns and UPRR ROW (to be verified) will be provided.

**SECTION A-A**  
Typical 110' Spans



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY D. Fredericks
DRAWN BY P. Walker
CHECKED BY J. Showers
IN CHARGE J. Valsecchi
DATE 04/29/11

**15% DRAFT  
SUBMITTAL  
FOR INTERNAL  
USE ONLY**

**NOT FOR  
CONSTRUCTION**



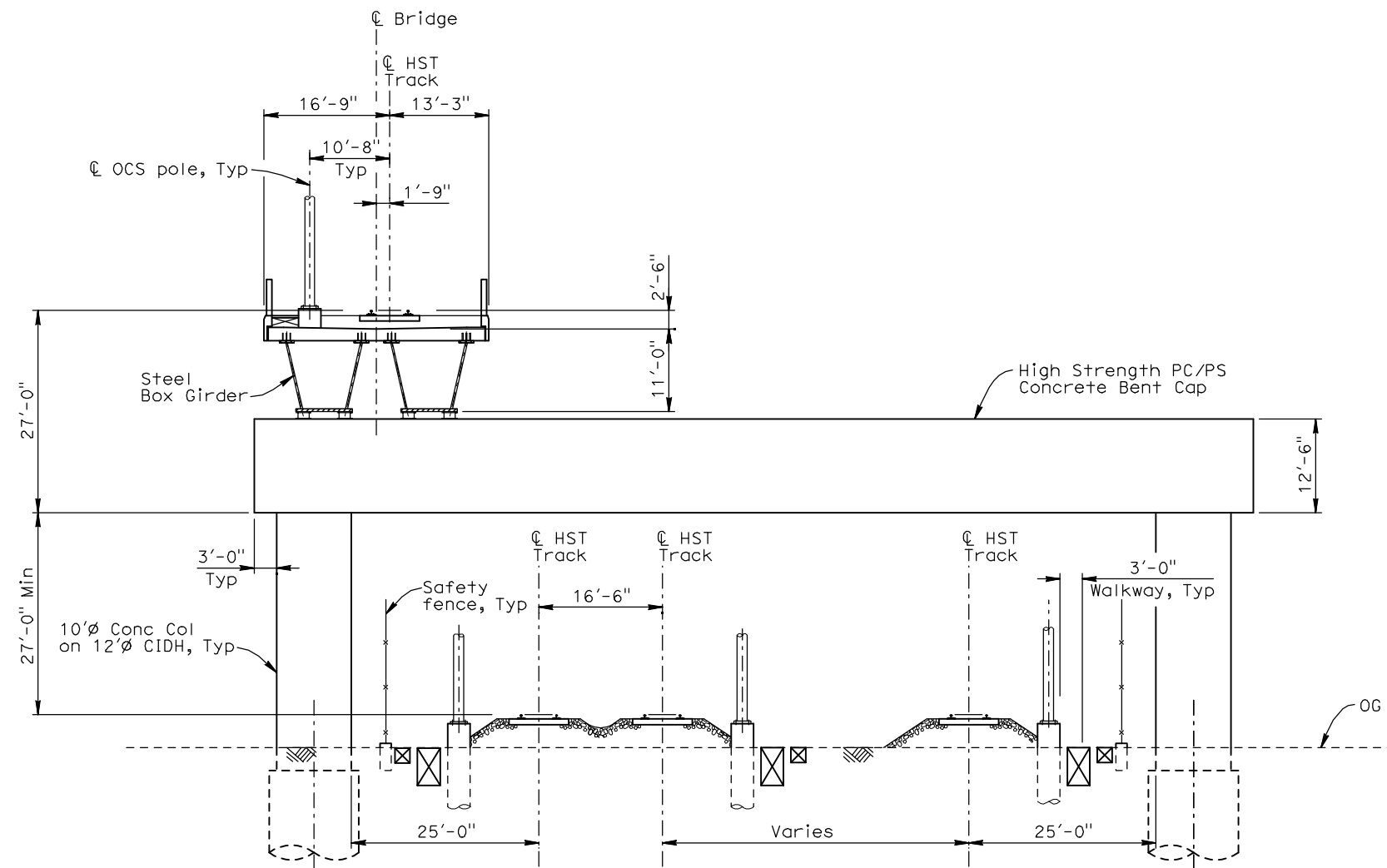
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

AERIAL GUIDEWAY  
TYPICAL SECTION 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3301
SCALE 3/16" = 1'-0"
SHEET NO.



4/30/2011 10:21:25 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\hybrid\15%\_cost\_reduction\_submittal\WF-SV-3401.dgn LeeC10



Datum Elev 160.00

OVER ON GRADE HST

SECTION CA

$\frac{3}{32}'' = 1'-0''$

SECTION CC SIMILAR

(Section CC similar but mirrored about  $\mathcal{C}$  of bridge)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**

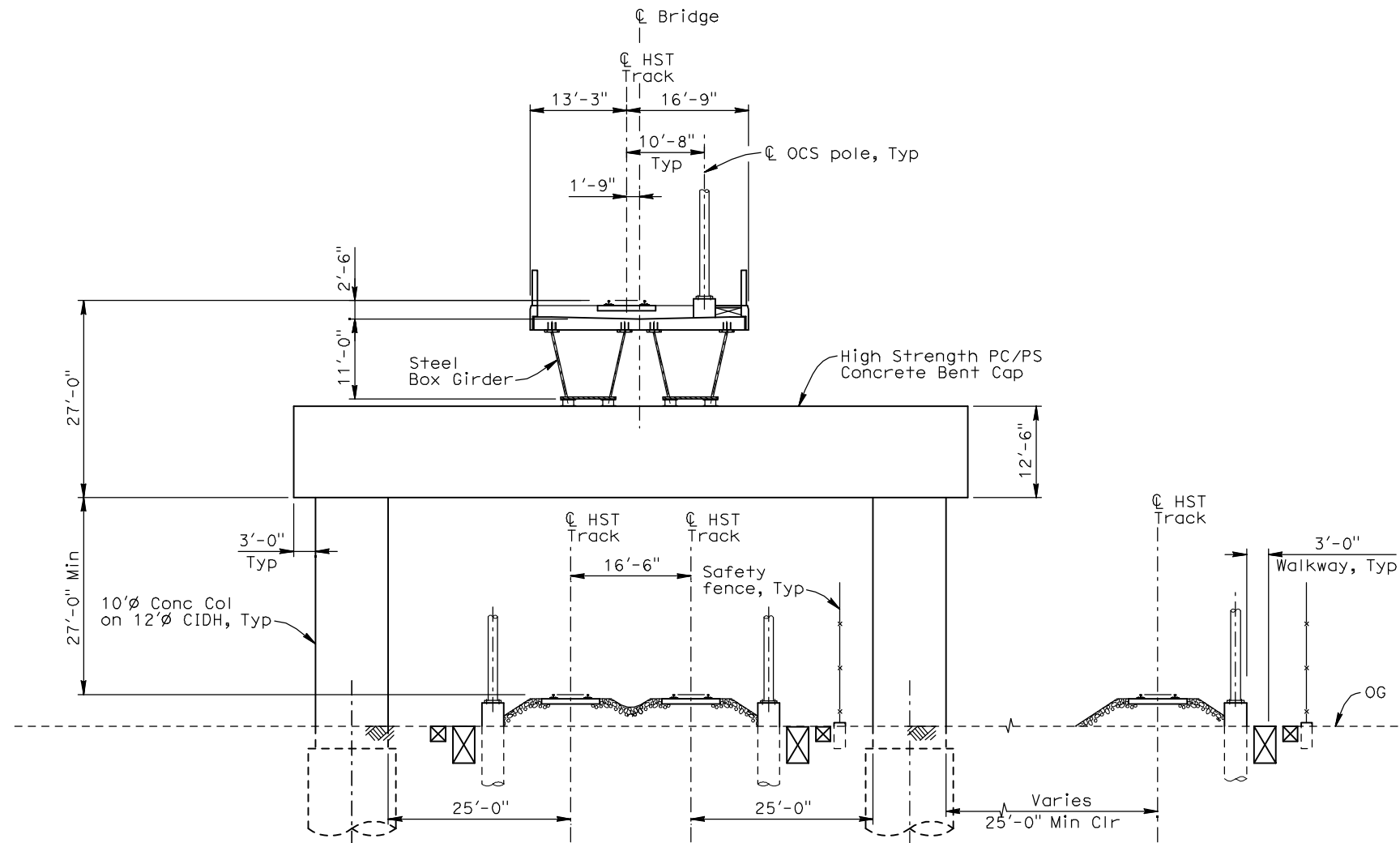


**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
ALIGNMENT HYBRID  
AVENUE 24  
SECTIONS  
SHEET 1

CONTRACT NO. HSR06-007
DRAWING NO. SV3401
SCALE As shown
SHEET NO. OF

4/30/2011 10:21:27 AM i:\chsr\60022962\task-02\_merced-fresno\cadd\struct\sheet\aps\hybrid\15%\_cost\_reduction\_submittal\WF-SV-3402.dgn LeeC10



OVER ON GRADE HST

Datum Elev 180.00

**SECTION CB**

$\frac{3}{32}'' = 1'-0''$

**SECTION CD SIMILAR**

(Section CD similar but mirrored about  $\mathcal{C}$  of bridge)

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. Lee
DRAWN BY B. Dolan
CHECKED BY T. Barnard
IN CHARGE A. Boone
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
ALIGNMENT HYBRID  
AVENUE 24  
SECTIONS  
SHEET 2

CONTRACT NO. HSR06-007
DRAWING NO. SV3402
SCALE As shown
SHEET NO. OF



# CALIFORNIA HIGH-SPEED TRAIN

## Roadway Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
Merced to Fresno Section

Volume 1: Roadway Grade Separations  
HYBRID Alternative

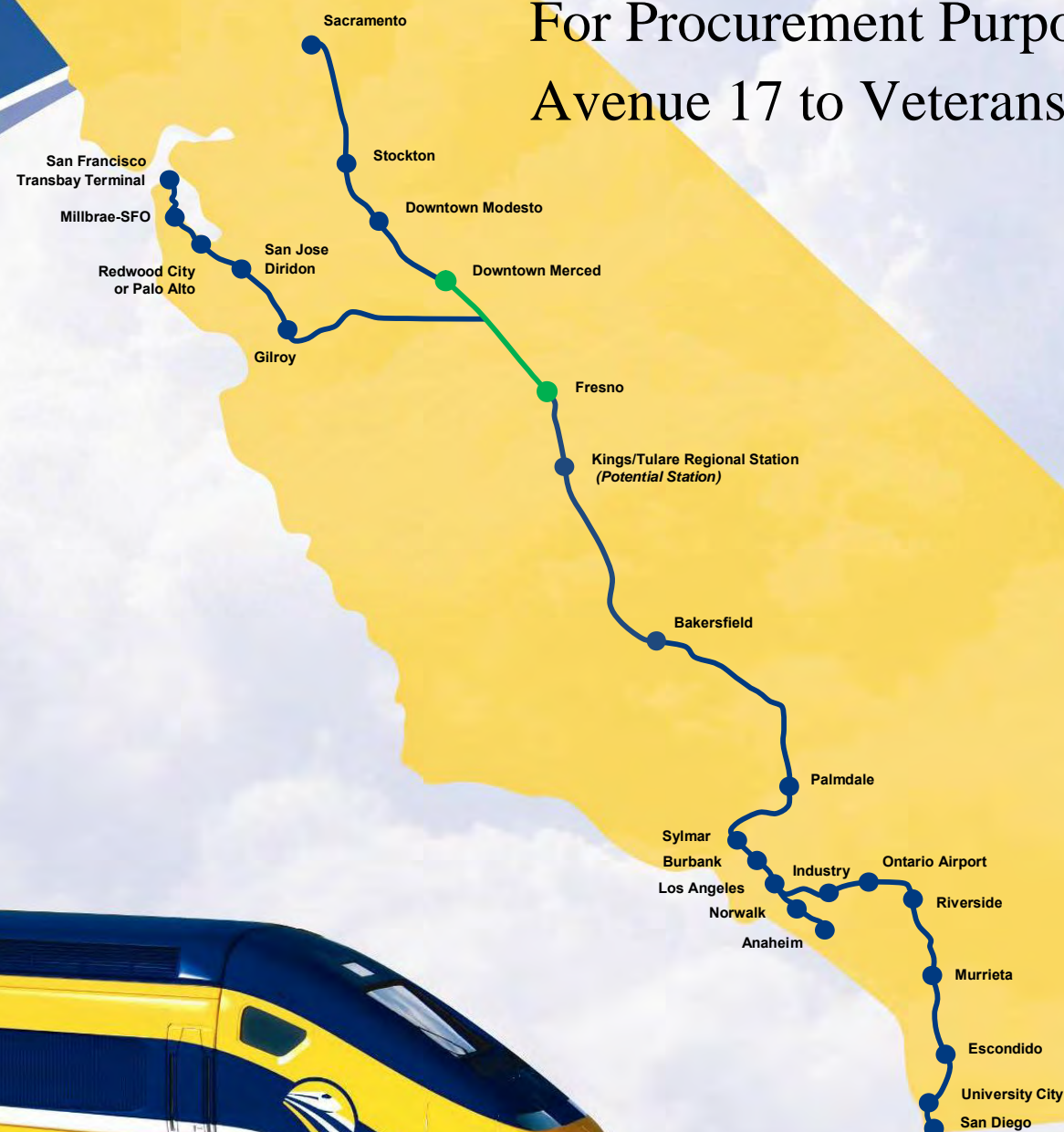
May 2011



**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration






4/28/2011 4:01:28 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid\grade separation\Index Of Drawings\B5190-B.dgn

ReyesC1

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
GENERAL						
		B5190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 4
		B5191-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 2 OF 4
		B5192-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 3 OF 4
		B5193-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 4 OF 4
		B5194-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B5200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B5201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		<del>CB5200-B</del>	<del>BNSF MAINLINE/WYE DO - (HYBRID)</del>	<del>GRADE SEPARATION - ROAD 10 ALT 1</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5201-B</del>	<del>BNSF MAINLINE/WYE DO - (HYBRID)</del>	<del>GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5202-B</del>	<del>BNSF MAINLINE/MERCED DO - (HYBRID)</del>	<del>GRADE SEPARATION - ROAD 13</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5203-B</del>	<del>UPRR/SR99 WYE/MERCED DO - (HYBRID)</del>	<del>GRADE SEPARATION - AVENUE 25</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5204-B</del>	<del>UPRR/SR99 WYE/MERCED DO - (HYBRID)</del>	<del>GRADE SEPRATION - AVENUE 26 ALT 1</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5205-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>GRADE SEPARATION - CROSS ROAD</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 1</del>
		<del>CB5206-B</del>	<del>UPRR/SR99 WYE/MERCED DO - (HYBRID)</del>	<del>UNDERPASS - AVENUE 26 ALT 2</del>	<del>KEYMAP</del>	<del>SHEET 1 OF 1</del>
		CT5190-B	HYBRID	GRADE SEPARATIONS	TYPICAL CROSS SECTIONS	SHEET 1 OF 1
		CT5191-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
LAYOUT						
1		CT0001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 1 OF 3
1		CT0002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 2 OF 3
1		CT0003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	LAYOUT	SHEET 3 OF 3
2		CT0004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 1 OF 3
2		CT0005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 2 OF 3
2		CT0006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	LAYOUT	SHEET 3 OF 3
3		CT0007-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 1 OF 3
3		CT0008-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 2 OF 3
3		CT0009-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	LAYOUT	SHEET 3 OF 3
4		CT0010-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 1 OF 3
4		CT0011-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 2 OF 3
4		CT0012-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	LAYOUT	SHEET 3 OF 3
5		CT0013-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 1 OF 4
5		CT0014-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 2 OF 4
5		CT0015-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 3 OF 4
5		CT0016-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	LAYOUT	SHEET 4 OF 4
6		CT0017-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 1 OF 3
6		CT0018-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 2 OF 3
6		CT0019-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	LAYOUT	SHEET 3 OF 3
7		CT0020-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 1 OF 3
7		CT0021-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 2 OF 3
7		CT0022-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	LAYOUT	SHEET 3 OF 3
<del>8</del>		<del>CT0023-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - RAYMOND RD</del>	<del>LAYOUT</del>	<del>SHEET 1 OF 3</del>
<del>8</del>		<del>CT0024-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - RAYMOND RD</del>	<del>LAYOUT</del>	<del>SHEET 2 OF 3</del>
<del>8</del>		<del>CT0025-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - RAYMOND RD</del>	<del>LAYOUT</del>	<del>SHEET 3 OF 3</del>
<del>9</del>		<del>CT0026-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - AVENUE 17</del>	<del>LAYOUT</del>	<del>SHEET 1 OF 3</del>
<del>9</del>		<del>CT0027-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - AVENUE 17</del>	<del>LAYOUT</del>	<del>SHEET 2 OF 3</del>
<del>9</del>		<del>CT0028-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>GRADE SEPARATION - AVENUE 17</del>	<del>LAYOUT</del>	<del>SHEET 3 OF 3</del>
10		CT0029-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 1 OF 3
10		CT0030-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 2 OF 3
10		CT0031-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 27	LAYOUT	SHEET 3 OF 3
11		CT0032-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 1 OF 3
11		CT0033-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 2 OF 3
11		CT0034-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 26	LAYOUT	SHEET 3 OF 3
32		CT0113-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 1 OF 3
32		CT0114-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 2 OF 3
32		CT0115-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20	LAYOUT	SHEET 3 OF 3
33		CT0116-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 1 OF 3
33		CT0117-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 2 OF 3
33		CT0118-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 20 1/2	LAYOUT	SHEET 3 OF 3
34		CT0119-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	LAYOUT	SHEET 1 OF 3
34		CT0120-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	LAYOUT	SHEET 2 OF 3
35		CT0121-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 24	LAYOUT	SHEET 3 OF 3
35		CT0122-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 1 OF 3
35		CT0123-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 2 OF 3
35		CT0124-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 22	LAYOUT	SHEET 3 OF 3
36		CT0125-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	LAYOUT	SHEET 1 OF 3
36		CT0126-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	LAYOUT	SHEET 2 OF 3
36		CT0127-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 23 1/2	LAYOUT	SHEET 3 OF 3
37		CT0128-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 1 OF 3
37		CT0129-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 2 OF 3
37		CT0130-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 16	LAYOUT	SHEET 3 OF 3
38		CT0131-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	LAYOUT	SHEET 1 OF 3
38		CT0132-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	LAYOUT	SHEET 2 OF 3
38		CT0133-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 15	LAYOUT	SHEET 3 OF 3
42		CT0143-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	LAYOUT	SHEET 1 OF 3
42		CT0144-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	LAYOUT	SHEET 2 OF 3


"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL	AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811		CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO		CONTRACT NO. HSR06-007
						DRAWN BY C. DELOS REYES					DRAWING NO. B5190-B		
						CHECKED BY A. SILVER					SCALE NONE		
						IN CHARGE A. BOONE					SHEET NO. ### OF ###		
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011	NOT FOR CONSTRUCTION				HYBRID GENERAL INDEX OF DRAWINGS SHEET 1 OF 4		



LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
42		CT0145-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - ROAD 9	LAYOUT	SHEET 3 OF 3
65		CT0146-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 1 OF 3
65		CT0147-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 2 OF 3
65		CT0148-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 7	LAYOUT	SHEET 3 OF 3
64		CT0149-A	BNSF MERCED CONNECTION - (HYBRID)	GRADE SEPARATION - C STREET	LAYOUT	SHEET 1 OF 1
41		CT5200-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 1 OF 3
41		CT5201-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 2 OF 3
41		CT5202-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALT 1	LAYOUT	SHEET 3 OF 3
40		CT5203-B	BNSF MAINLINE / MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 1 OF 5
40		CT5204-B	BNSF MAINLINE / MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 2 OF 5
40		CT5205-B	BNSF MAINLINE / MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 3 OF 5
40		CT5206-B	BNSF MAINLINE / MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 4 OF 5
40		CT5207-B	BNSF MAINLINE / MERCED DO - (HYBRID)	GRADE SEPARATION - ROAD 13	LAYOUT	SHEET 5 OF 5
27		CT5210-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 1 OF 14
27		CT5211-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 2 OF 14
27		CT5212-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 3 OF 14
27		CT5213-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 4 OF 14
27		CT5214-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 5 OF 14
27		CT5215-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 6 OF 14
27		CT5216-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 7 OF 14
27		CT5217-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 8 OF 14
27		CT5218-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 9 OF 14
27		CT5219-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 10 OF 14
27		CT5220-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 11 OF 14
27		CT5221-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 12 OF 14
27		CT5222-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 13 OF 14
27		CT5223-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 25	LAYOUT	SHEET 14 OF 14
26		CT5227-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 1 OF 10
26		CT5228-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 2 OF 10
26		CT5229-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 3 OF 10
26		CT5230-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 4 OF 10
26		CT5231-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 5 OF 10
26		CT5232-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 6 OF 10
26		CT5233-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 7 OF 10
26		CT5234-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 8 OF 10
26		CT5235-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 9 OF 10
26		CT5236-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	GRADE SEPARATION - AVENUE 26 ALT 1	LAYOUT	SHEET 10 OF 10
25		CT5238-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 1 OF 3
25		CT5239-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 2 OF 3
25		CT5240-B	UPRR/SR99 MERCED DO - (HYBRID)	GRADE SEPARATION - CROSS ROAD	LAYOUT	SHEET 3 OF 3
26		CT5246-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 1 OF 3
26		CT5247-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 2 OF 3
26		CT5248-B	UPRR/SR99 WYE/MERCED DO - (HYBRID)	UNDERPASS - AVENUE 26 ALT 2	LAYOUT	SHEET 3 OF 3
41		CT5249-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 1 OF 3
41		CT5250-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 2 OF 3
41		CT5251-B	BNSF MAINLINE / WYE DO - (HYBRID)	GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	LAYOUT	SHEET 3 OF 3
PROFILE						
		CT5900-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 1 OF 4
		CT5901-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 2 OF 4
		CT5902-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 3 OF 4
		CT5903-B	UPRR/SR99 - (HYBRID)	GRADE SEPARATION	SUPERELEVATION TEMPLATE	SHEET 4 OF 4
1		CT1000-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 1 OF 3
1		CT1001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 2 OF 3
1		CT1002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 9	PROFILE	SHEET 3 OF 3
2		CT1003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 1 OF 3
2		CT1004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 2 OF 3
2		CT1005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 10	PROFILE	SHEET 3 OF 3
3		CT1006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 1 OF 3
3		CT1007-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 2 OF 3
3		CT1008-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 11	PROFILE	SHEET 3 OF 3
4		CT1009-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 1 OF 3
4		CT1010-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 2 OF 3
4		CT1011-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 12	PROFILE	SHEET 3 OF 3
5		CT1012-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 1 OF 3
5		CT1013-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 2 OF 3
5		CT1014-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 13	PROFILE	SHEET 3 OF 3
6		CT1015-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 1 OF 3
6		CT1016-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 2 OF 3
6		CT1017-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15	PROFILE	SHEET 3 OF 3
7		CT1018-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 1 OF 3
7		CT1019-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 2 OF 3
7		CT1020-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 15 1/2	PROFILE	SHEET 3 OF 3
8		CT1021-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 1 OF 3
8		CT1022-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 2 OF 3
8		CT1023-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - RAYMOND RD	PROFILE	SHEET 3 OF 3


"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL	AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811		CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CONTRACT NO. HSR06-007	
						DRAWN BY C. DELOS REYES					DRAWING NO. B5191-B	
						CHECKED BY A. SILVER					SCALE NONE	
						IN CHARGE A. BOONE					SHEET NO. ### OF ###	
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011	NOT FOR CONSTRUCTION				CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO HYBRID GENERAL INDEX OF DRAWINGS SHEET 2 OF 4	

4/28/2011 4:01:41 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid\grade separation\index of Drawings\B5192-B.dgn

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
9		<del>CT1024-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 17</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
9		<del>CT1025-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 17</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
9		<del>CT1026-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 17</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
10		<del>CT1027-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 27</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
10		<del>CT1028-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 27</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
10		<del>CT1029-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 27</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
11		<del>CT1030-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 26</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
11		<del>CT1031-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 26</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
11		<del>CT1032-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 26</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
32		<del>CT1113-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
32		<del>CT1114-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
32		<del>CT1115-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
33		<del>CT1116-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20 1/2</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
33		<del>CT1117-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20 1/2</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
33		<del>CT1118-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 20 1/2</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
34		<del>CT1119-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 24</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
34		<del>CT1120-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 24</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
34		<del>CT1121-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 24</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
35		<del>CT1122-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 22</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
35		<del>CT1123-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 22</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
35		<del>CT1124-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 22</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
36		<del>CT1125-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 23 1/2</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
36		<del>CT1126-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 23 1/2</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
36		<del>CT1127-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 23 1/2</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
37		<del>CT1128-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 16</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
37		<del>CT1129-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 16</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
37		<del>CT1130-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 16</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
38		<del>CT1131-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 15</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
38		<del>CT1132-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 15</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
38		<del>CT1133-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 15</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
42		<del>CT1143-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 9</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
42		<del>CT1144-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 9</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
42		<del>CT1145-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 9</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
65		<del>CT1146-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 7</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
65		<del>CT1147-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 7</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
65		<del>CT1148-A</del>	<del>BNSF MAIN LINE -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 7</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
64		<del>CT1149-A</del>	<del>BNSF MERCED CONNECTION -- (HYBRID)</del>	<del>GRADE SEPARATION -- G ST</del>	<del>PROFILE</del>	<del>SHEET 1 OF 1</del>
41		<del>CT6200-B</del>	<del>BNSF MAINLINE / WYE DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 10 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 1 OF 3</del>
41		<del>CT6201-B</del>	<del>BNSF MAINLINE / WYE DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 10 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 2 OF 3</del>
41		<del>CT6202-B</del>	<del>BNSF MAINLINE / WYE DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 10 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 3 OF 3</del>
40		<del>CT6203-B</del>	<del>BNSF MAINLINE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 13</del>	<del>PROFILE</del>	<del>SHEET 1 OF 5</del>
40		<del>CT6204-B</del>	<del>BNSF MAINLINE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 13</del>	<del>PROFILE</del>	<del>SHEET 2 OF 5</del>
40		<del>CT6205-B</del>	<del>BNSF MAINLINE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 13</del>	<del>PROFILE</del>	<del>SHEET 3 OF 5</del>
40		<del>CT6206-B</del>	<del>BNSF MAINLINE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 13</del>	<del>PROFILE</del>	<del>SHEET 4 OF 5</del>
40		<del>CT6207-B</del>	<del>BNSF MAINLINE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- ROAD 13</del>	<del>PROFILE</del>	<del>SHEET 5 OF 5</del>
27		<del>CT6210-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 1 OF 14</del>
27		<del>CT6211-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 2 OF 14</del>
27		<del>CT6212-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 3 OF 14</del>
27		<del>CT6213-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 4 OF 14</del>
27		<del>CT6214-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 5 OF 14</del>
27		<del>CT6215-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 6 OF 14</del>
27		<del>CT6216-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 7 OF 14</del>
27		<del>CT6217-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 8 OF 14</del>
27		<del>CT6218-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 9 OF 14</del>
27		<del>CT6219-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 10 OF 14</del>
27		<del>CT6220-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 11 OF 14</del>
27		<del>CT6221-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 12 OF 14</del>
27		<del>CT6222-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 13 OF 14</del>
27		<del>CT6223-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 25</del>	<del>PROFILE</del>	<del>SHEET 14 OF 14</del>
26		<del>CT6226-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 1 OF 10</del>
26		<del>CT6227-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 2 OF 10</del>
26		<del>CT6228-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 3 OF 10</del>
26		<del>CT6229-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 4 OF 10</del>
26		<del>CT6230-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 5 OF 10</del>
26		<del>CT6231-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 6 OF 10</del>
26		<del>CT6232-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 7 OF 10</del>
26		<del>CT6233-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 8 OF 10</del>
26		<del>CT6234-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 9 OF 10</del>
26		<del>CT6235-B</del>	<del>UPRR / SR99 WYE / MERCED DO -- (HYBRID)</del>	<del>GRADE SEPARATION -- AVENUE 26 ALT 1</del>	<del>PROFILE</del>	<del>SHEET 10 OF 10</del>


"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL	AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811		CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO	CONTRACT NO. HSR06-007
						DRAWN BY C. DELOS REYES						DRAWING NO. B5192-B
						CHECKED BY A. SILVER						SCALE NONE
						IN CHARGE A. BOONE						SHEET NO. ### OF ###
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011	NOT FOR CONSTRUCTION				INDEX OF DRAWINGS SHEET 3 OF 4	



LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
25		CT6236-B	UPRR/SR99-MERCED-DO--(HYBRID)	GRADE-SEPARATION--CROSS-ROAD	PROFILE	SHEET 1 OF 3
25		CT6237-B	UPRR/SR99-MERCED-DO--(HYBRID)	GRADE-SEPARATION--CROSS-ROAD	PROFILE	SHEET 2 OF 3
25		CT6238-B	UPRR/SR99-MERCED-DO--(HYBRID)	GRADE-SEPARATION--CROSS-ROAD	PROFILE	SHEET 3 OF 3
26		CT6244-B	UPRR/SR99-WYE/MERCED-DO--(HYBRID)	UNDERPASS--AVENUE 26-ALT 2	PROFILE	SHEET 1 OF 3
26		CT6245-B	UPRR/SR99-WYE/MERCED-DO--(HYBRID)	UNDERPASS--AVENUE 26-ALT 2	PROFILE	SHEET 2 OF 3
26		CT6246-B	UPRR/SR99-WYE/MERCED-DO--(HYBRID)	UNDERPASS--AVENUE 26-ALT 2	PROFILE	SHEET 3 OF 3
41		CT6247-B	BNSF-MAINLINE/WYE-DO--(HYBRID)	GRADE-SEPARATION--ROAD 10-ALONG-EXIST-ALT 2	PROFILE	SHEET 1 OF 3
41		CT6248-B	BNSF-MAINLINE/WYE-DO--(HYBRID)	GRADE-SEPARATION--ROAD 10-ALONG-EXIST-ALT 2	PROFILE	SHEET 2 OF 3
41		CT6249-B	BNSF-MAINLINE/WYE-DO--(HYBRID)	GRADE-SEPARATION--ROAD 10-ALONG-EXIST-ALT 2	PROFILE	SHEET 3 OF 3

"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL  NOT FOR CONSTRUCTION	<div><div>AECOM</div><div>Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811</div><div>CH2MHILL</div></div>	<div><div></div><div>CALIFORNIA HIGH-SPEED RAIL AUTHORITY</div></div>	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO  HYBRID GENERAL INDEX OF DRAWINGS SHEET 4 OF 4	CONTRACT NO. HSR06-007
					DRAWN BY C. DELOS REYES	DRAWING NO. B5193-B					
					CHECKED BY A. SILVER	SCALE NONE					
					IN CHARGE A. BOONE	SHEET NO. ### OF ###					
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011					

4/28/2011 4:01:24 PM P:\60022962\Task 02\_Merced-Fresno\cadd\Civil\Sheet\Package 3 - Hybrid\Volume 1B - Hybrid Grade Separation\Abbreviation\B5194-B.dgn

ABBREVIATIONS

ALIGNMENT

HORIZONTAL	
BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR
VERTICAL	
BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
CL	CENTER LINE
CLR	CENTERLINE, CLASS
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
	GAS LINE (16")
	COMMUNICATION LINE
	WATER LINE
	FIBER OPTIC LINE
	ELECTRICAL LINE
	ELECTRICAL TOWER
	SEWER LINE
	STORM DRAIN LINE
	FUEL LINE
	TELEPHONE LINE
	PETROLEUM LINE (12")
	OVERHEAD
	NORTH ARROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
	PROPOSED CONTOUR

ReyesC1

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION



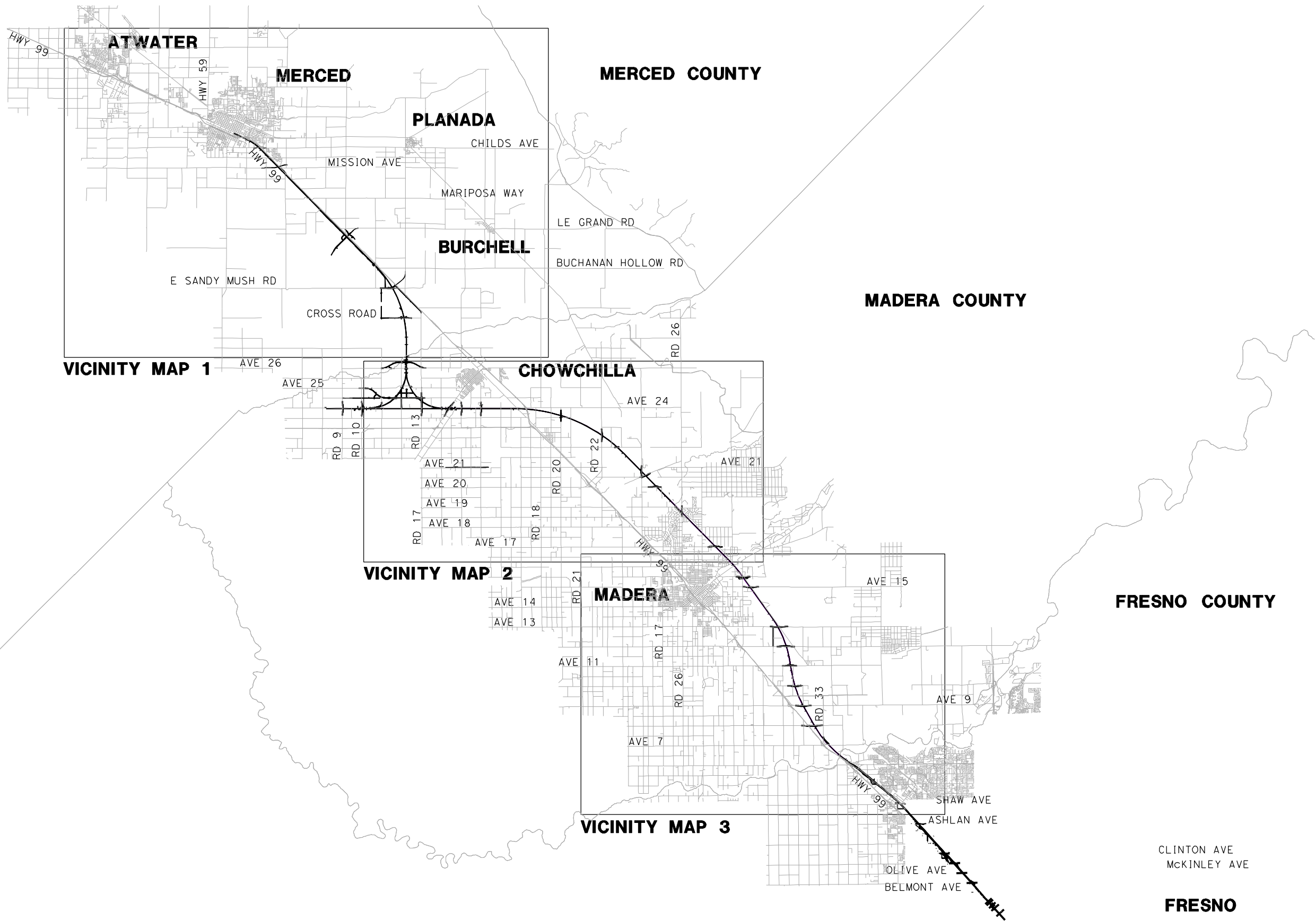
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID  
GENERAL  
ABBREVIATIONS, SYMBOLS AND NOTES  
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B5194-B
SCALE NO SCALE
SHEET NO. ### OF ###



2/16/2012 11:55:45 AM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1 - 15% Plans\CADD\Sheet\HYBRID\A1 HYBRID\B5200-B\_REV2.dgn

GibsonR1



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
D. AYELE  
DRAWN BY  
A. TRINH  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
HYBRID

INDEX MAP  
SHEET 1 OF 2

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
B5200-B  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###

2/16/2012 11:59:14 AM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\HYBRID\A1 HYBRID\B5201-B\_REV2.dgn GibsonR1

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1 UNDERPASS - AVENUE 26 ALT 2	CT5227-B - CT5236-B CT5246-B - CT5248-B	ST1135
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

LOCATION NUMBER LEGEND

- (X) - INDICATES GRADE SEPARATION  
(X) - INDICATES CALTRANS FACILITIES MODIFICATION  
(X) - INDICATES LOCAL ROAD RELOCATION

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY T. WALTZ
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



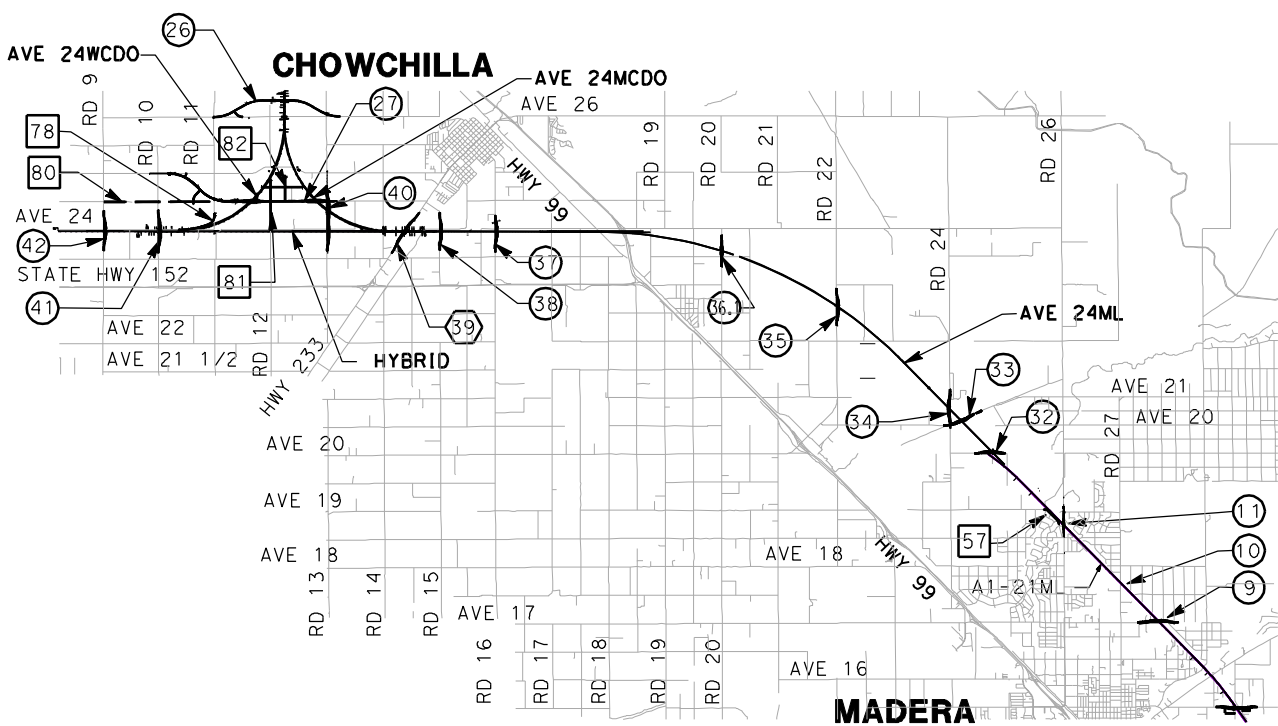
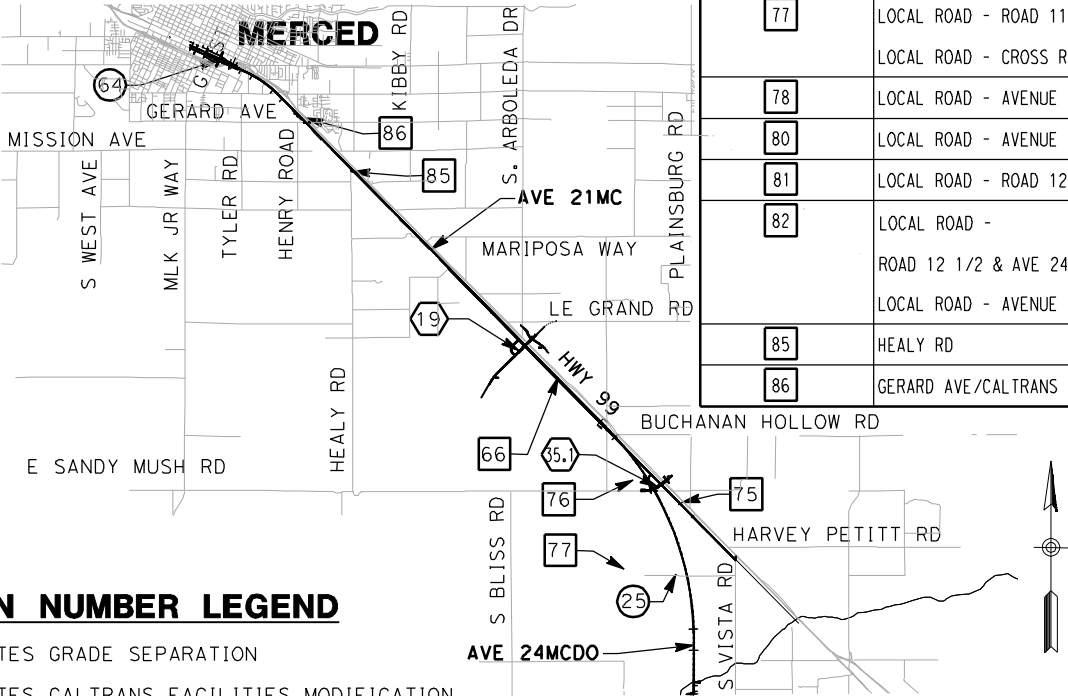
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID

INDEX MAP  
SHEET 2 OF 2

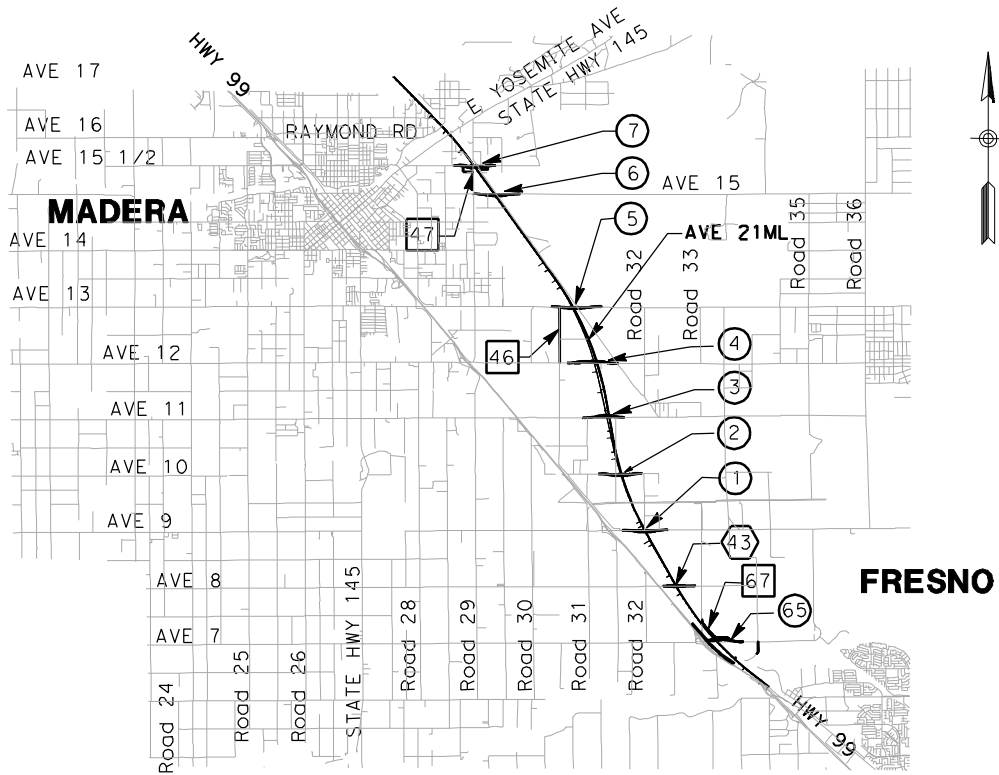
CONTRACT NO. HSR06-007
DRAWING NO. B5201-B
SCALE NO SCALE
SHEET NO. ### OF ###

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1 UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7200-B - CT7203-B CT7215-B - CT7217-B	ST1150
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1 GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5200-B - CT5202-B CT5249-B - CT5251-B	ST1160 ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD LOCAL ROAD - WEST FRONTAGE ROAD	CR9210-B CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11 LOCAL ROAD - CROSS ROAD	CR9208-B - CR9209-B CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4 LOCAL ROAD - AVENUE 24 3/4	CR9215-B CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	

VICINITY MAP 1



VICINITY MAP 2



VICINITY MAP 3



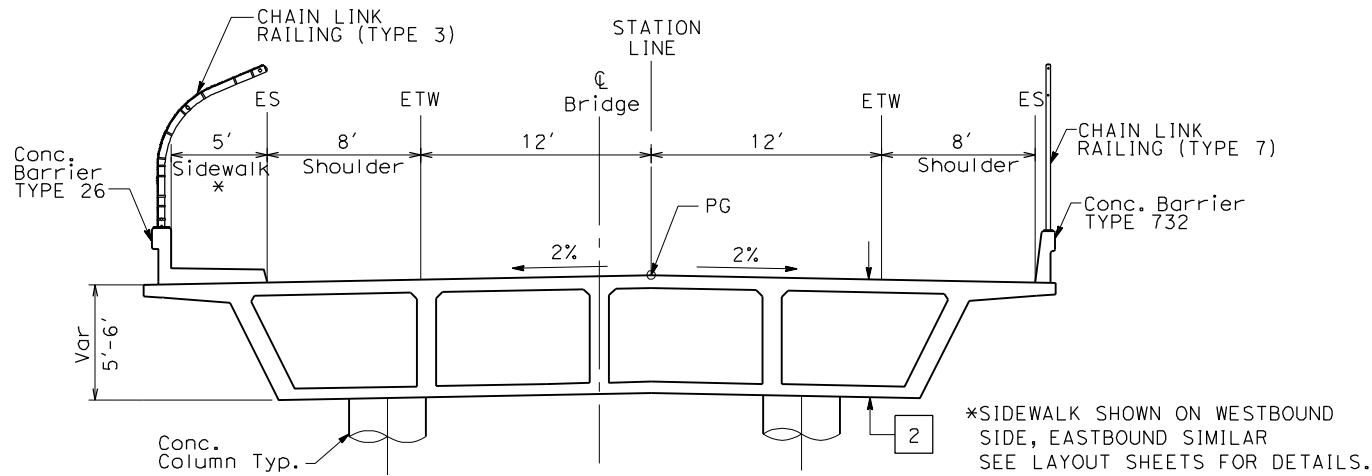
FOR ROADWAY STRUCTURES  
SEE STRUCTURAL  
INDEX MAPS



4/27/2011 7:05:33 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid grade separation\Typical Section\CT5190-B.dgn  
oyeled

NOTES:

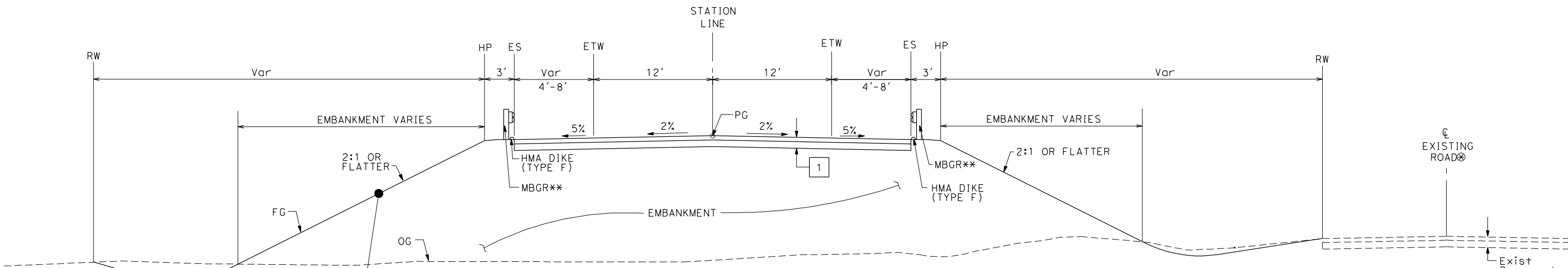
- 1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
- 2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
- 3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
- 4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.



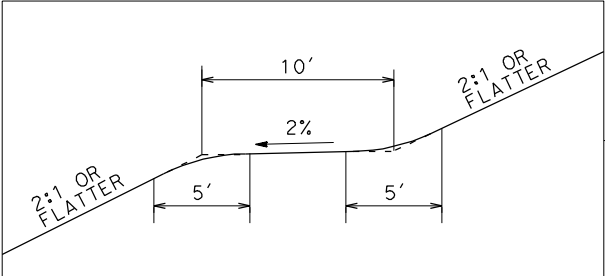
STRUCTURAL SECTIONS:

- 1 HMA TYPE A AB CLASS 2
- 2 CAST IN PLACE / PRESTRESSED BOX GIRDER (6' STRUCTURE DEPTH)

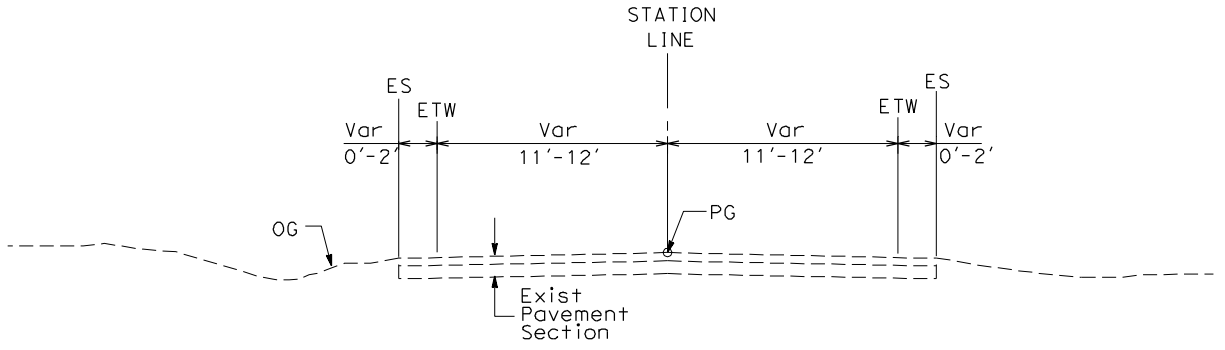
OVERHEAD STRUCTURE  
SEE STRUCTURAL PLANS



FILL SECTIONS TO OVERHEAD STRUCTURE  
WEST SIDE SHOWN (EAST SIDE SIMILAR)



BENCHING DETAIL



EXISTING LOCAL ROAD  
WEST SIDE SHOWN (EAST SIDE SIMILAR)  
SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING

TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR THE HYBRID ALIGNMENT:

NO.	STREET NAME		
1	AVENUE 9	13	AVENUE 26
2	AVENUE 10	14	RAYMOND RD
3	AVENUE 11	15	CROSS RD
4	AVENUE 12	16	ROAD 10
5	AVENUE 13	17	ROAD 13
6	AVENUE 15	18	ROAD 15
7	AVENUE 15.5	19	ROAD 16
8	AVENUE 17	20	ROAD 22
9	AVENUE 20	21	ROAD 24
10	AVENUE 20.5	22	ROAD 26
11	AVENUE 23.5	23	ROAD 27
12	AVENUE 25		

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
K. OAKS  
DRAWN BY  
K. OAKS  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

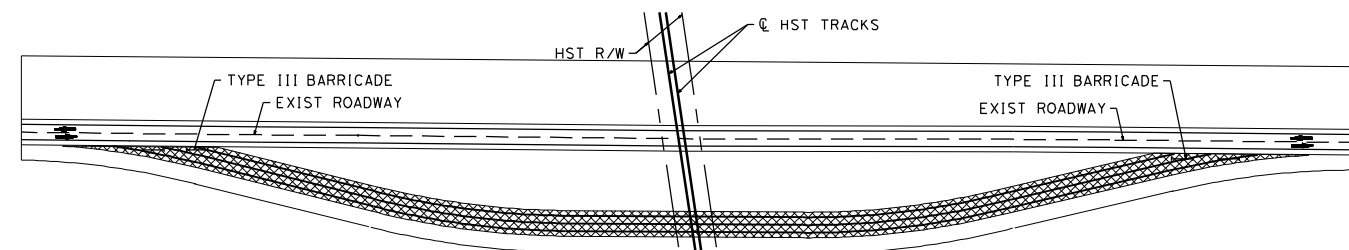
AECOM  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
CH2MHILL



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID  
GRADE SEPARATIONS  
TYPICAL CROSS SECTIONS  
SHEET 1 OF 1

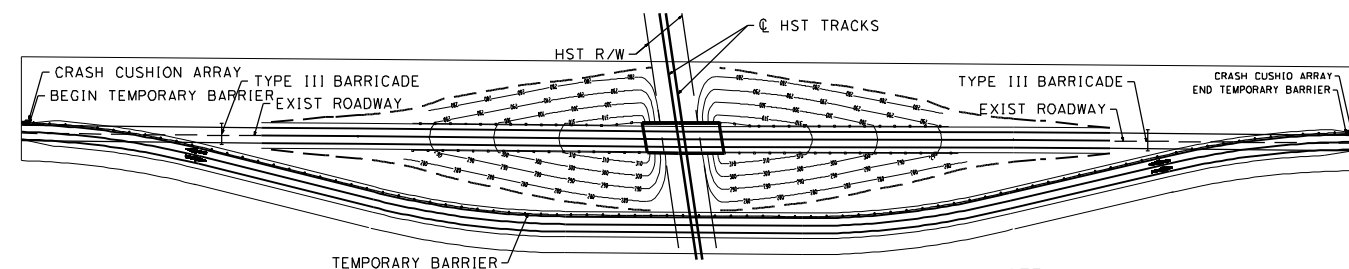
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT5190-B  
SCALE  
NTS  
SHEET NO.  
### OF ###

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN  
CENTERED PROPOSED ALIGNMENT



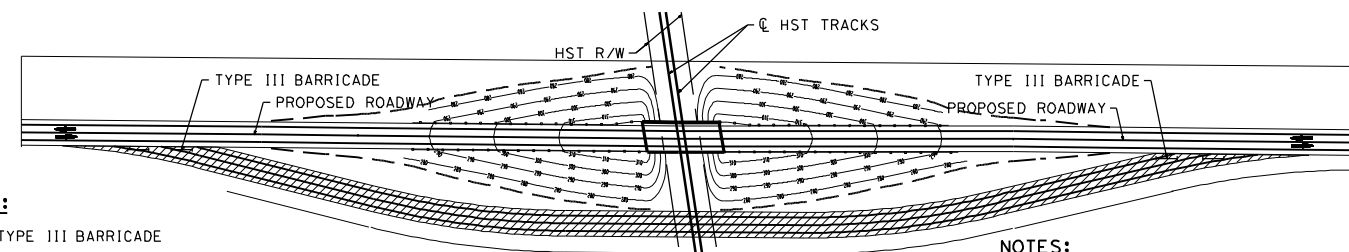
STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT TEMPORARY DETOUR ROAD



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY

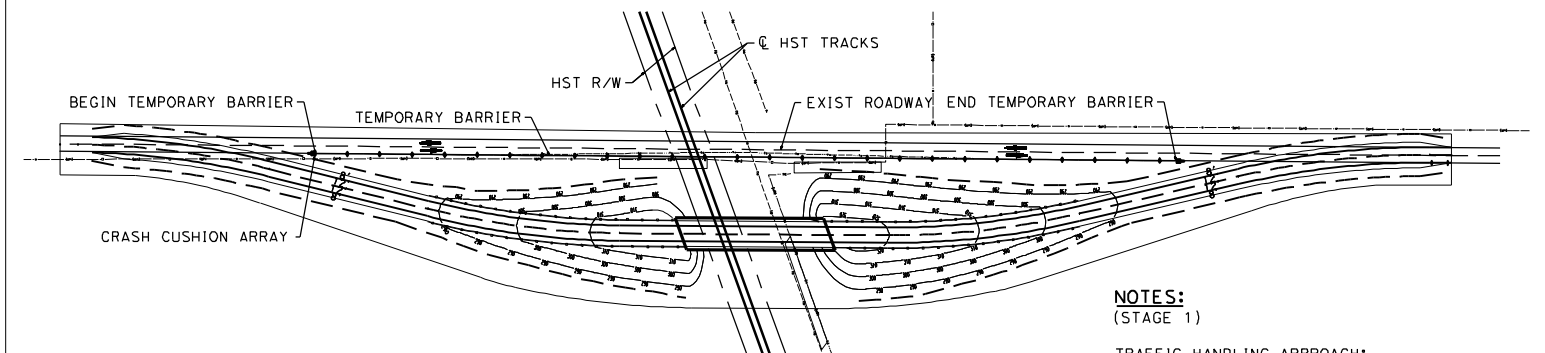


STAGE CONSTRUCTION (STAGE 3)

NOTES:  
(STAGE 3)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- REMOVE TEMPORARY DETOUR ROAD

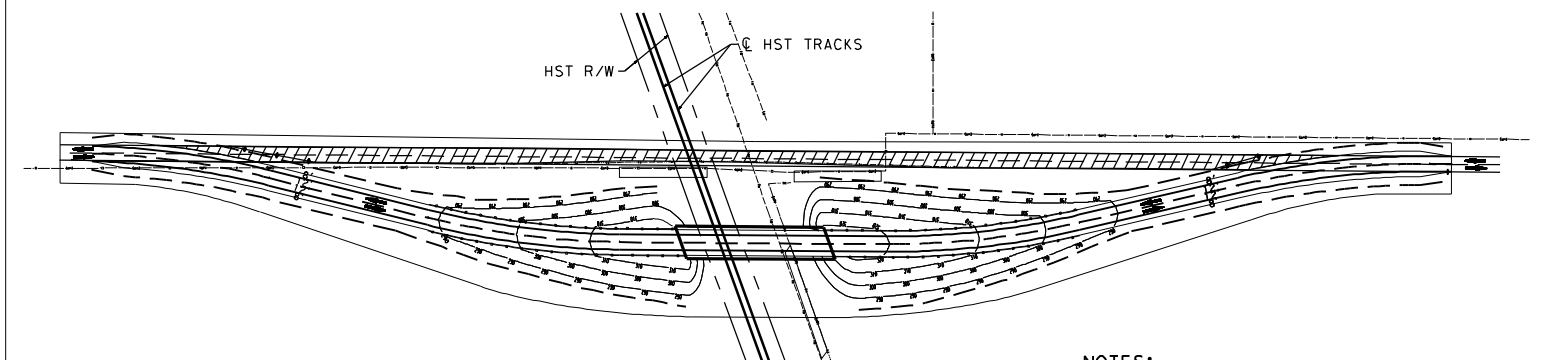
- LEGEND:
- TYPE III BARRICADE
  - CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - CONSTRUCT TEMPORARY ROAD
  - REMOVE TEMPORARY ROAD

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN  
SHIFTED PROPOSED ALIGNMENT



STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 2)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT REALIGNED ROAD CONFORMS  
- COMPLETE DRAINAGE FACILITIES  
- REMOVE BASE AND SURFACING OF EXIST ROAD

- LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - REMOVE BASE AND SURFACING (EXIST ROAD)

USER=GibsonR1 12/1/2011 3:01:34 PM I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Civil\Sheet\ROADWAY\RECENT\_UPDATES\12-1-11\WF-CT-5000-A\_Revise\_2.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	07/27/2011

RECORD SET 15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



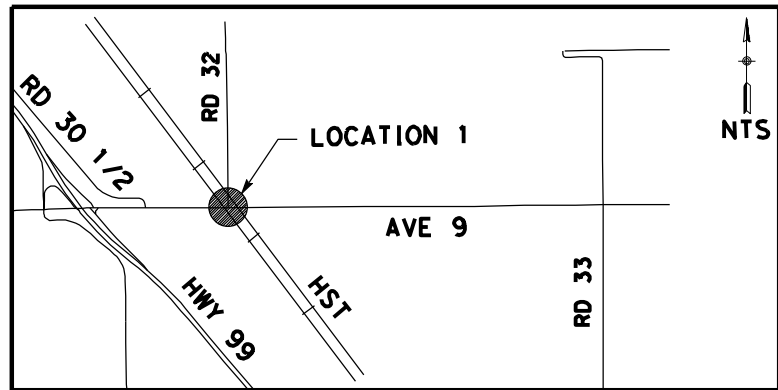
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

HYBRID  
GENERAL STAGE CONSTRUCTION &  
TRAFFIC HANDLING APPROACH  
SHEET 1 OF 1

CONTRACT NO.	HSR06-007
DRAWING NO.	CT5191-B
SCALE	NO SCALE
SHEET NO.	### OF ###



12/6/2012 6:19:49 PM \\usscr1fp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501.1 Deliverable 1\Addendum 7\MF-CT-0001-A6.dgn Huang



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A6 THROUGH CT1002-A6.



**REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011



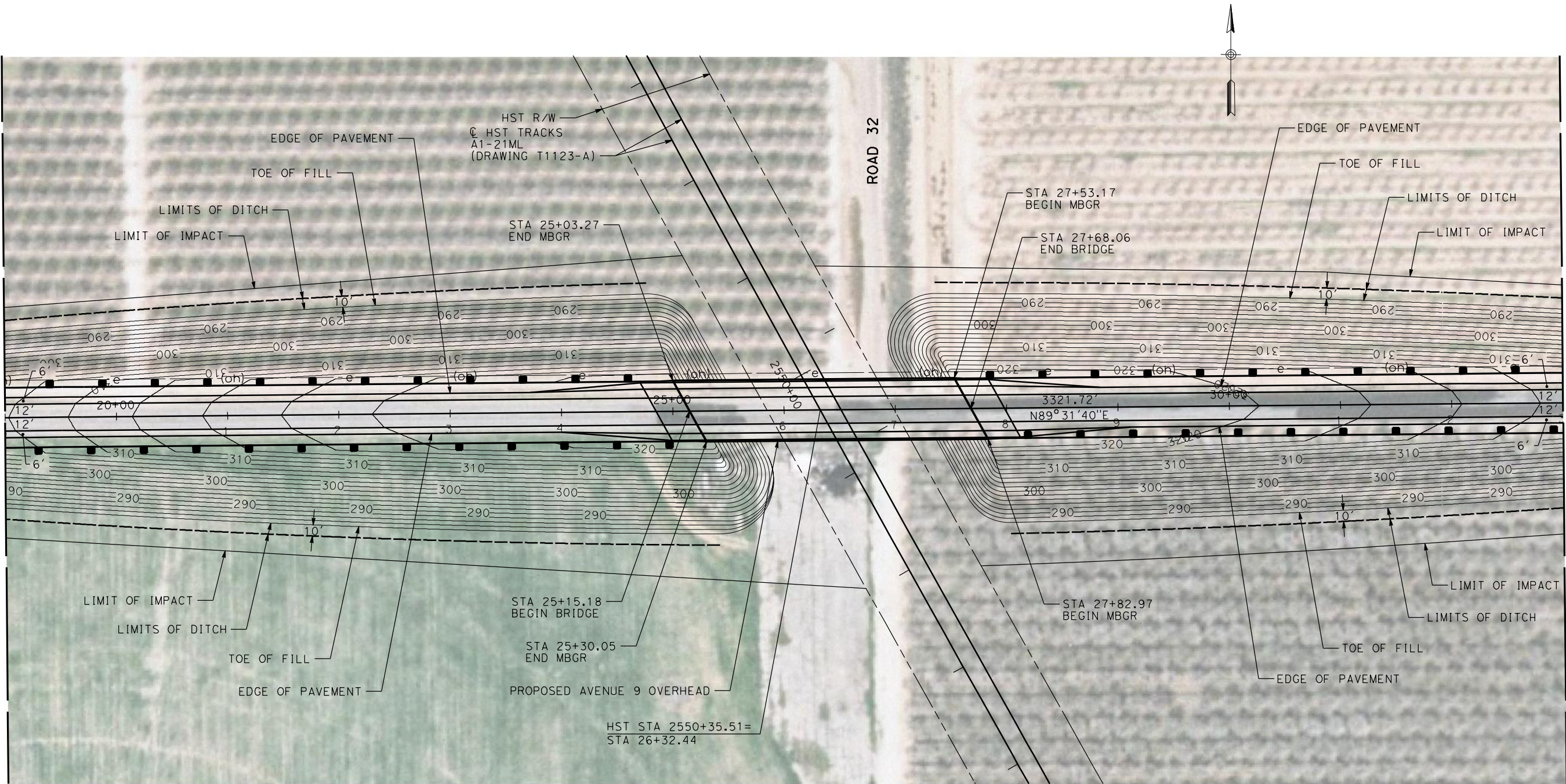
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
LAYOUT  
SHEET 1 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0001-A7
SCALE AS SHOWN
SHEET NO. OF ###

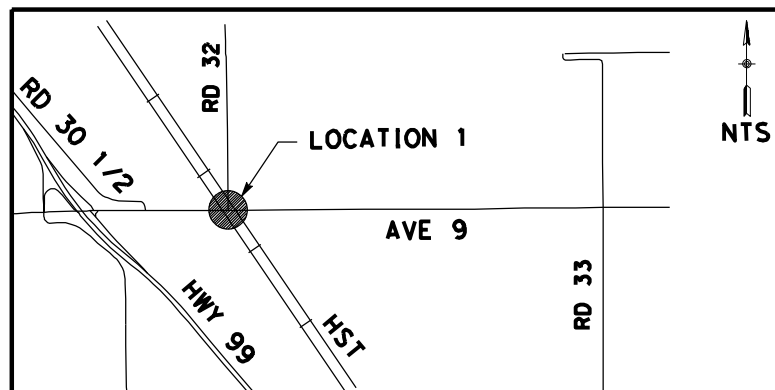


12/6/2012 6:21:28 PM \\usscrip001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\MF-CT-0002-A6.dgn

MATCH LINE STA 19+00  
SEE DRAWING CT0001-A6

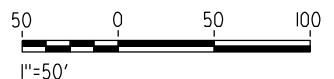


MATCH LINE STA 33+00  
SEE DRAWING CT0003-A6



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A6 THROUGH CT1002-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



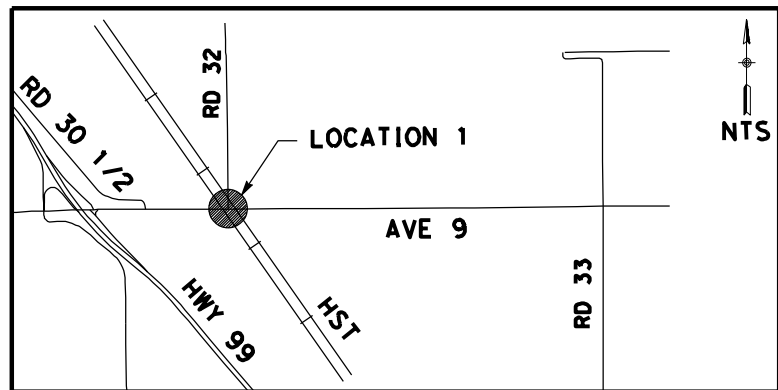
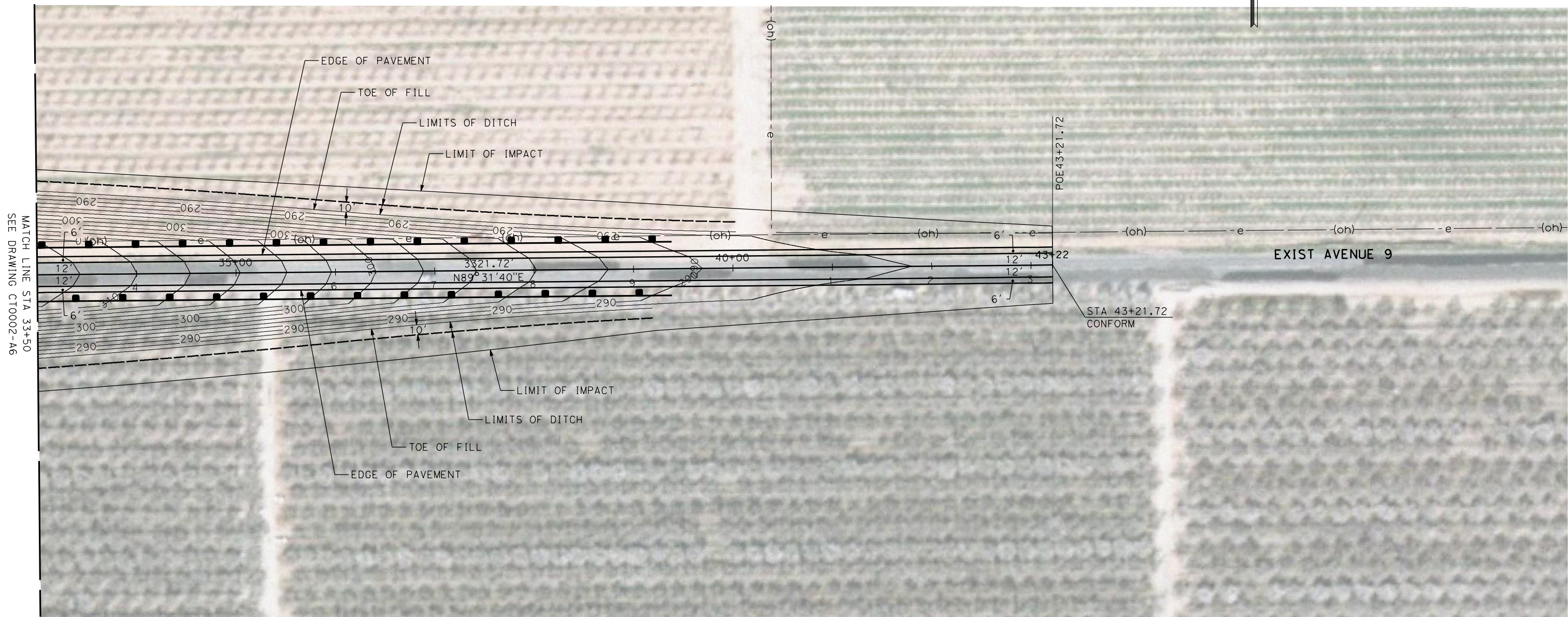
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0002-A7
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:21:48 PM \\usscrip001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-0003-A6.dgn Huang



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1000-A6 THROUGH CT1002-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
LAYOUT  
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0003-A7
SCALE AS SHOWN
SHEET NO. OF ###

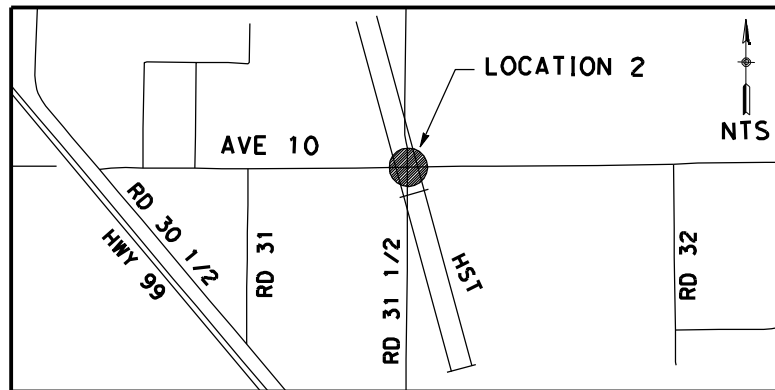
12/17/2012 ADDENDUM 7 - RFP HSR 11-16



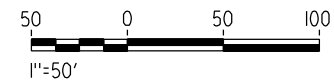
2/16/2012 12:03:03 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\WF-CT-0004-A\_REV2.dgn  
GibsonR1



CURVE DATA					
NO.	R	$\Delta$	T	L	V
①	5000.00'	6°52'32"	300.36'	600.00'	45 MPH
②	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:  
1. FOR PROFILES, SEE DRAWINGS CT1003-A THROUGH CT1005-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

GRADE SEPARATION - AVENUE 10  
LAYOUT  
SHEET 1 OF 3

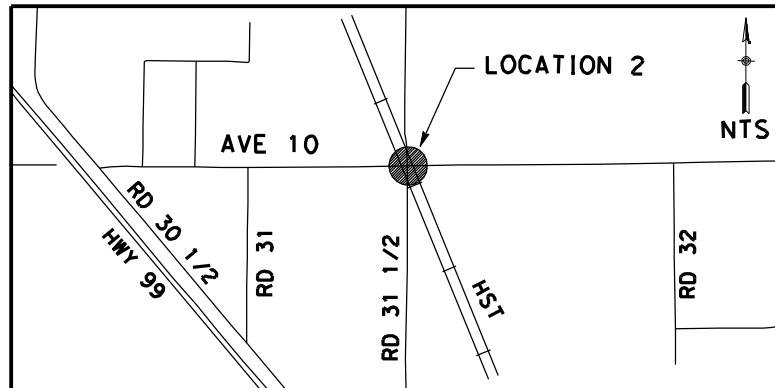
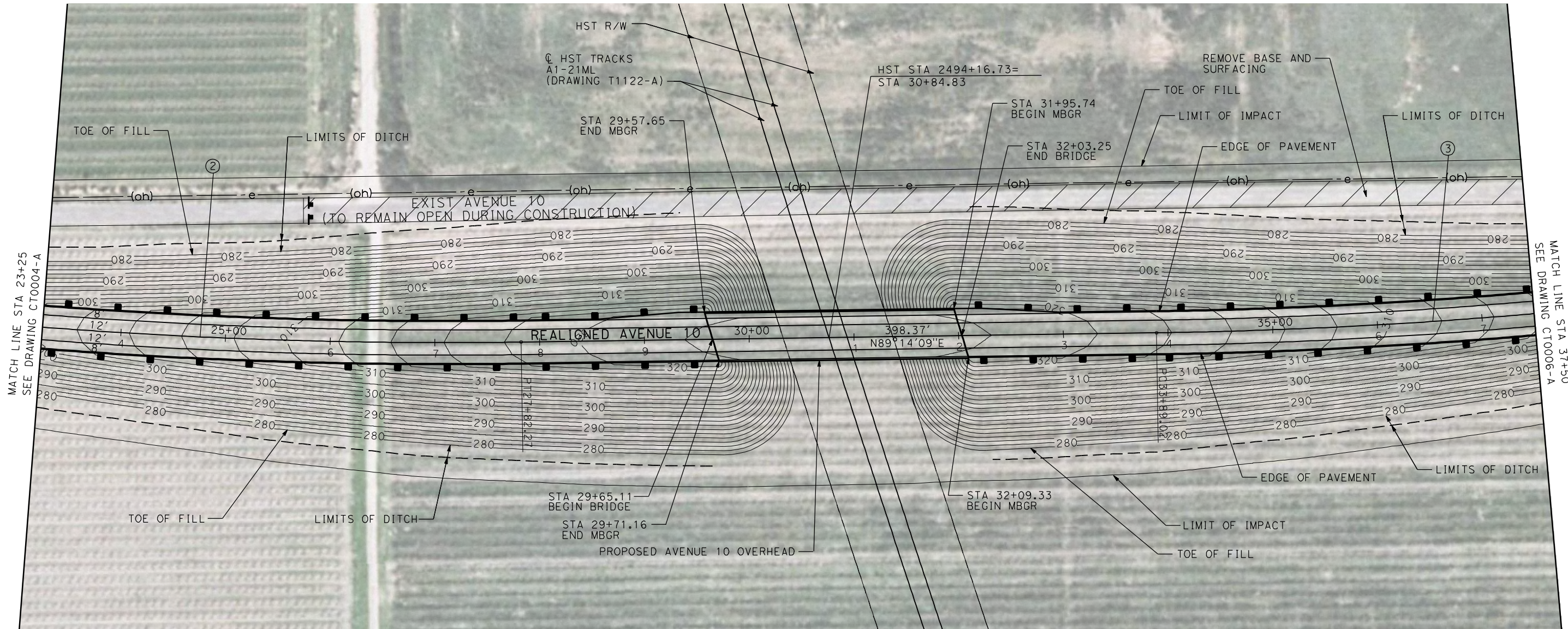
CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0004-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



2/16/2012 12:03:35 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibson\Rev 1 - 15% Plans\CADD\Sheet\Plans\A1\Rev2\MF-CT-0005-A\_REV2.dgn  
GibsonR1

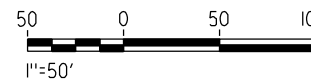


CURVE DATA					
NO.	R	$\Delta$	T	L	V
②	5000.00'	6°52'32"	300.36'	600.00'	45 MPH
③	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



**NOTE:**

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1003-A THROUGH CT1005-A.



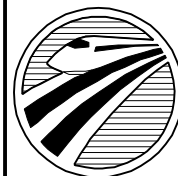
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

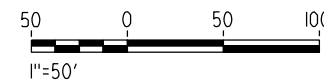
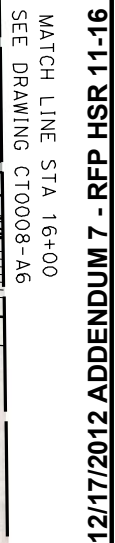
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 10  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0005-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###









**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**

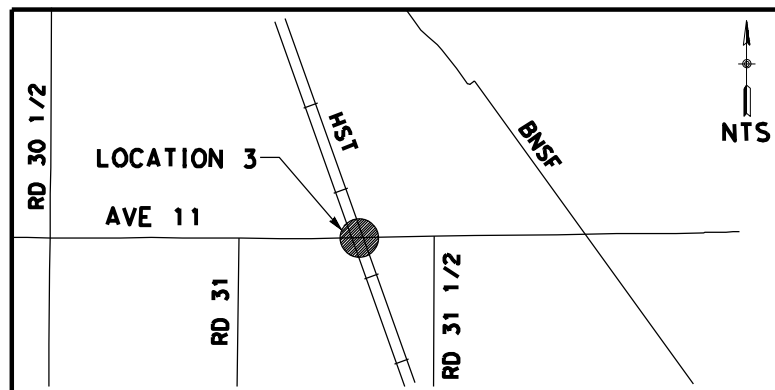
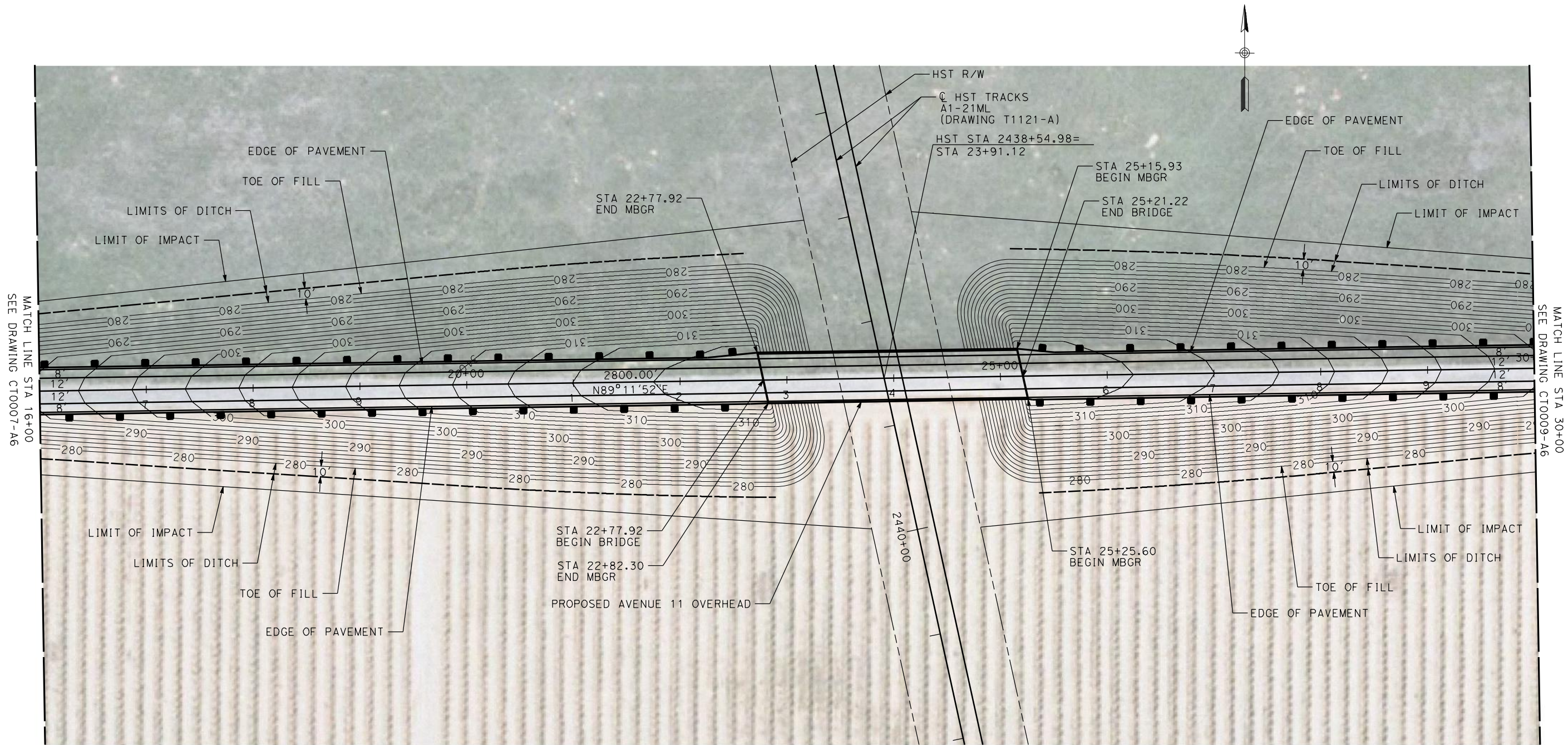


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
 BNSF MAIN LINE - (HYBRID)  
 GRADE SEPARATION - AVENUE 11  
 LAYOUT  
 SHEET 1 OF 3

CONTRACT NO.	HST06-007
DRAWING NO.	CT0007-A7
SCALE	AS SHOWN
SHEET NO.	OF ###



12/6/2012 6:23:56 PM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-0008-A6.dgn Huang



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A6 THROUGH CT1008-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

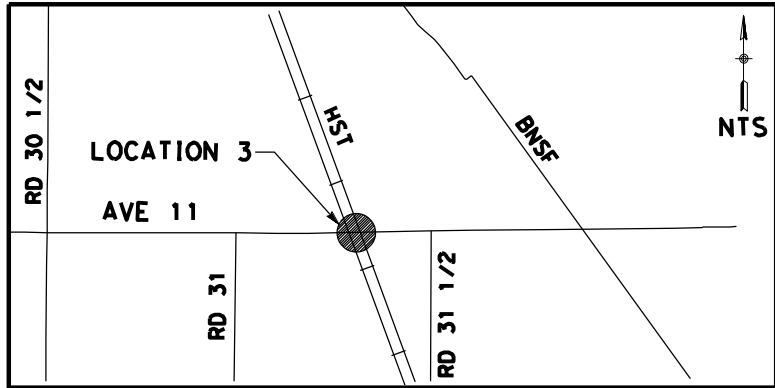
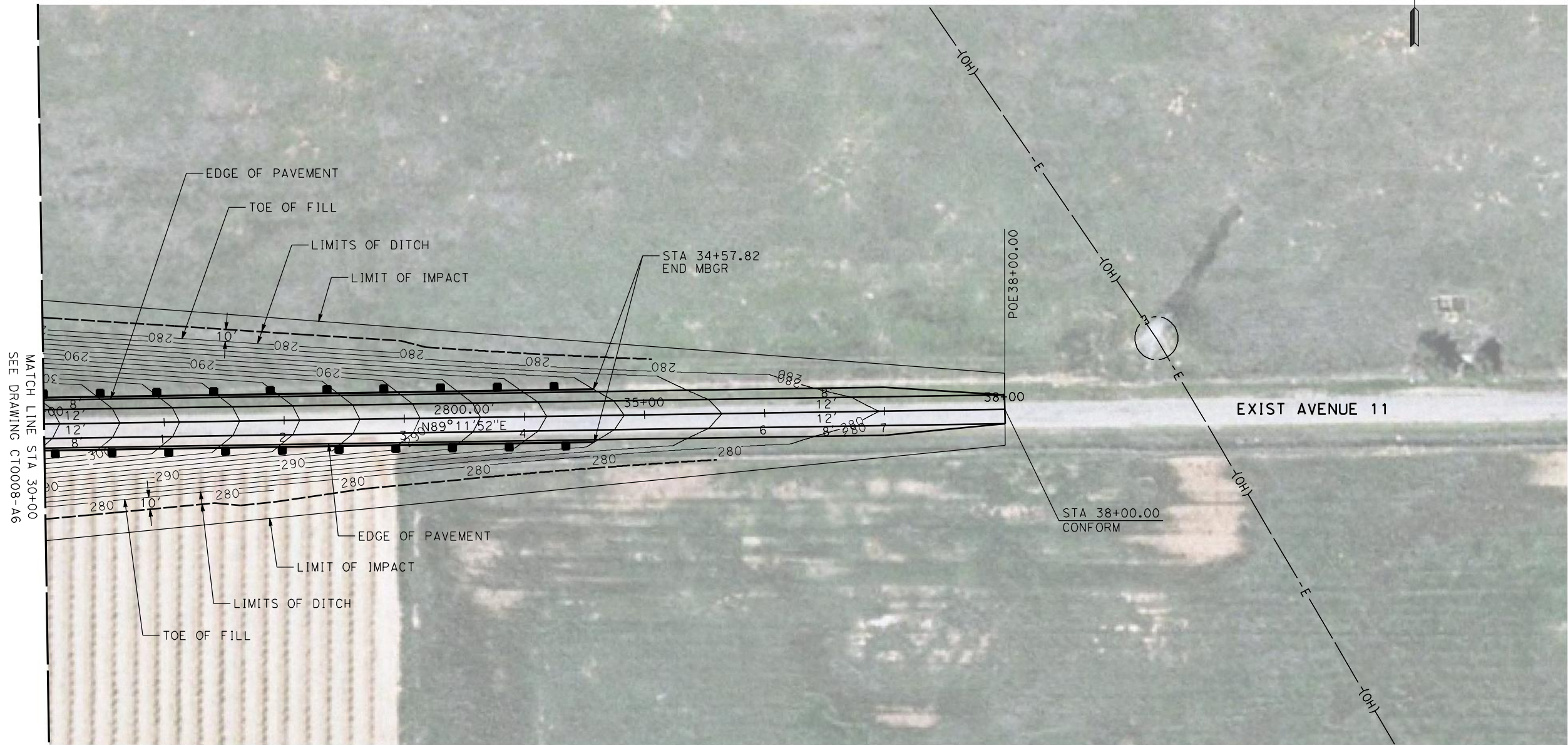


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 11  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0008-A7  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



12/6/2012 6:24:19 PM \\usscrlfp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501.1 Deliverable 1\Addendum 7\WF-CT-0009-A6.dgn Huang



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1006-A6 THROUGH CT1008-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

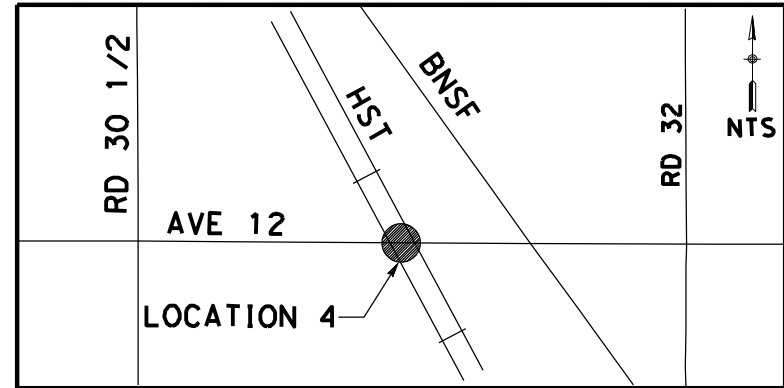
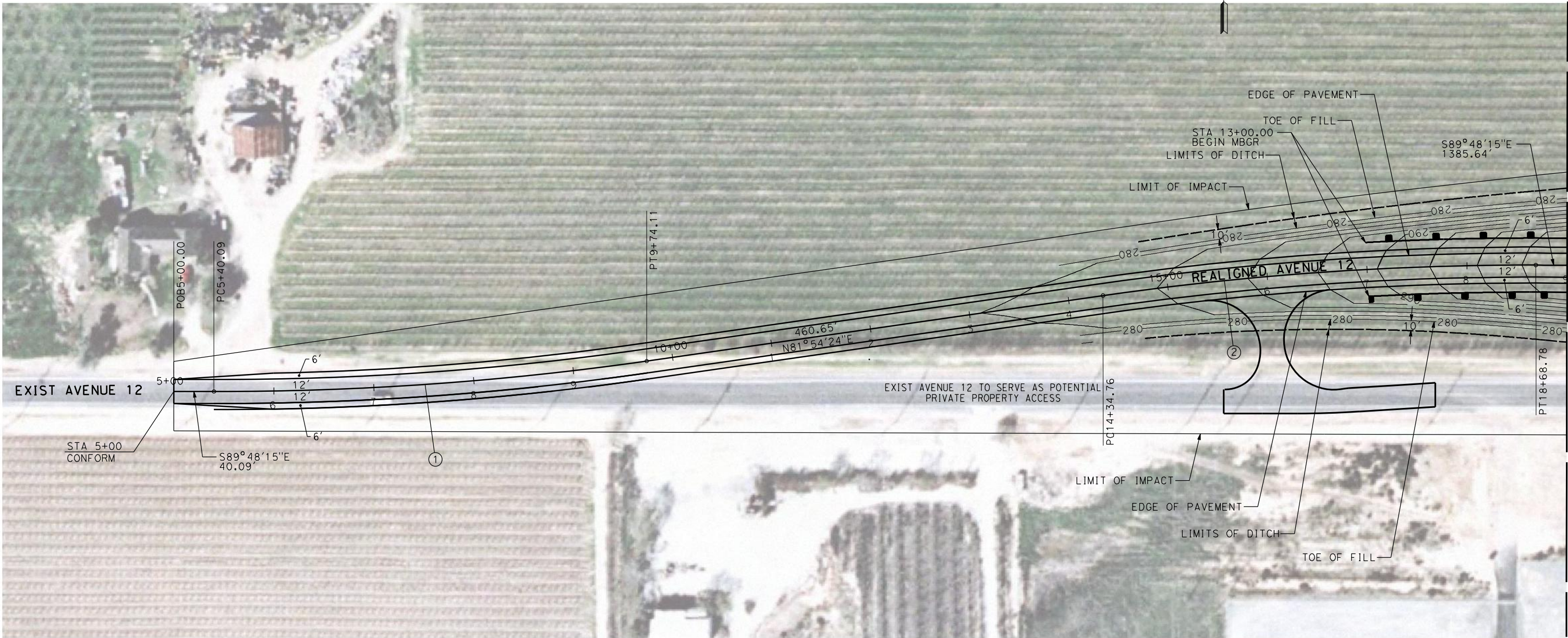


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 11  
LAYOUT  
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0009-A7
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:24:40 PM \\usscri\p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-0010-A6.dgn Huang



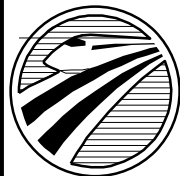
NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A6 THROUGH CT1011-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012



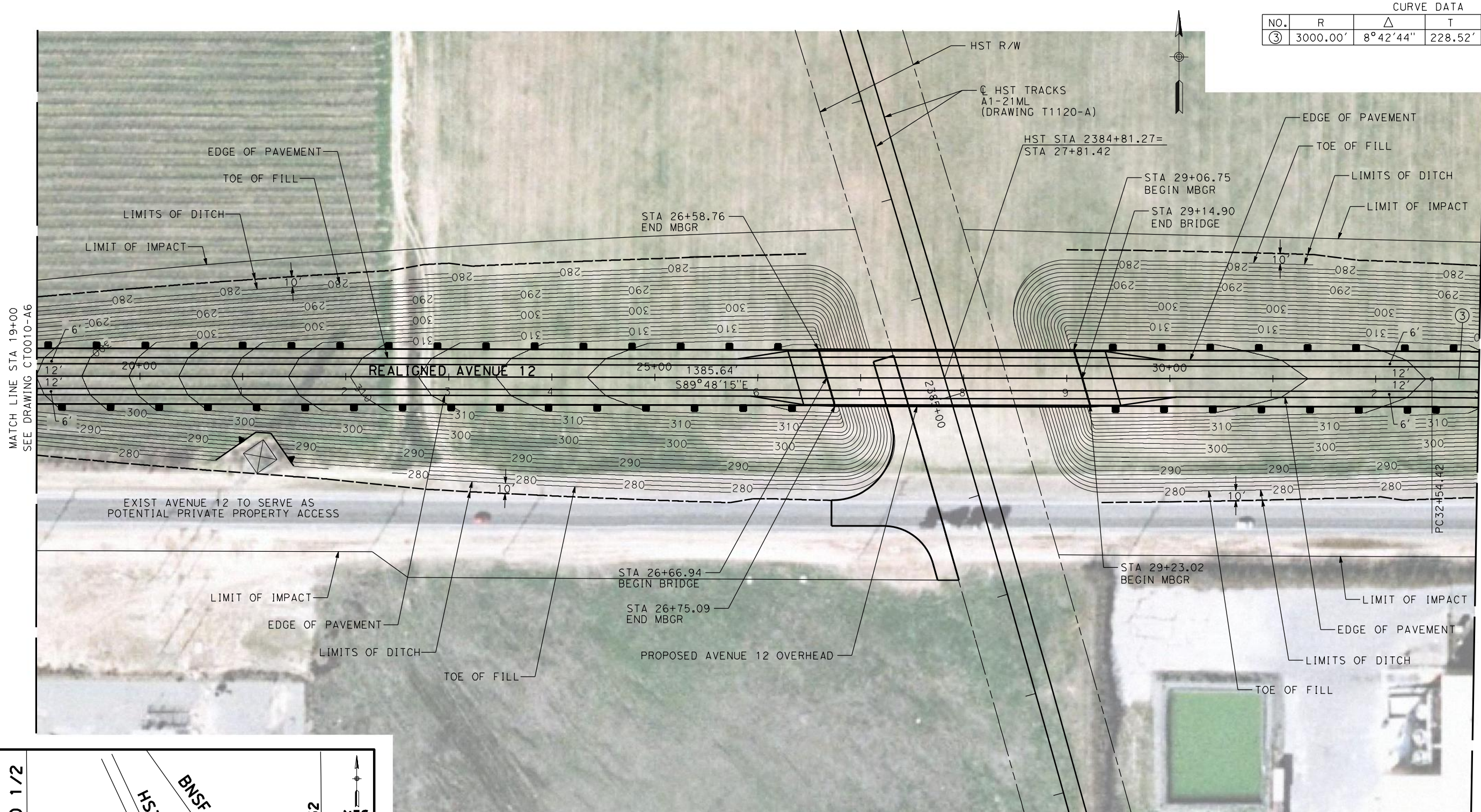
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
LAYOUT  
SHEET 1 OF 3

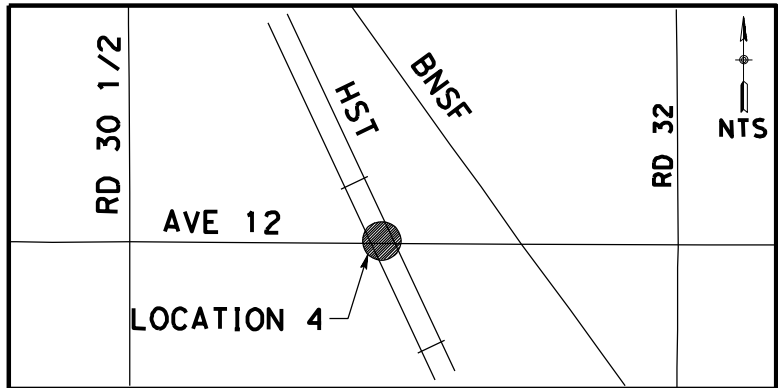
CONTRACT NO. HST06-007
DRAWING NO. CT0010-A7
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:25:02 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501.1 Deliverable 1\Addendum 7\MF-CT-0011-A6.dgn Huang



CURVE DATA					
NO.	R	$\Delta$	T	L	V
③	3000.00'	8°42'44"	228.52'	228.53'	55 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A6 THROUGH CT1011-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
LAYOUT  
SHEET 2 OF 3

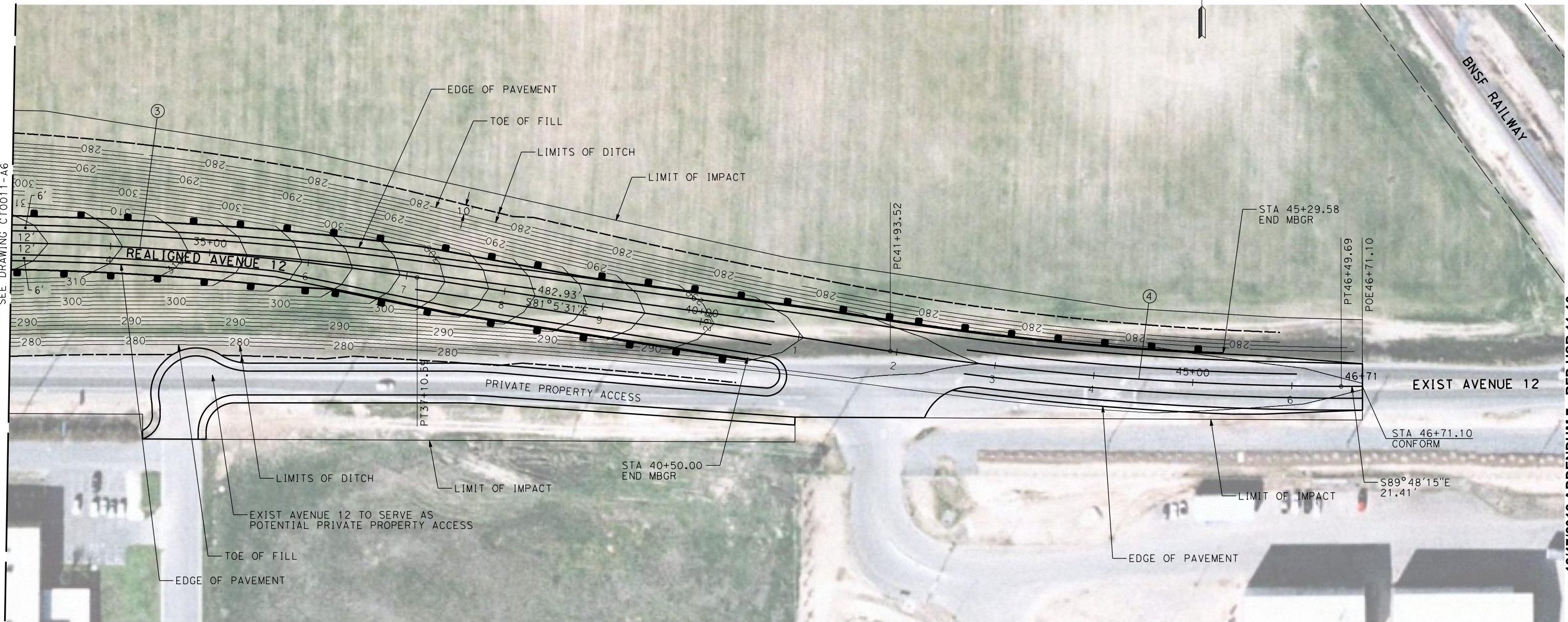
CONTRACT NO. HST06-007
DRAWING NO. CT0011-A7
SCALE AS SHOWN
SHEET NO. OF ###



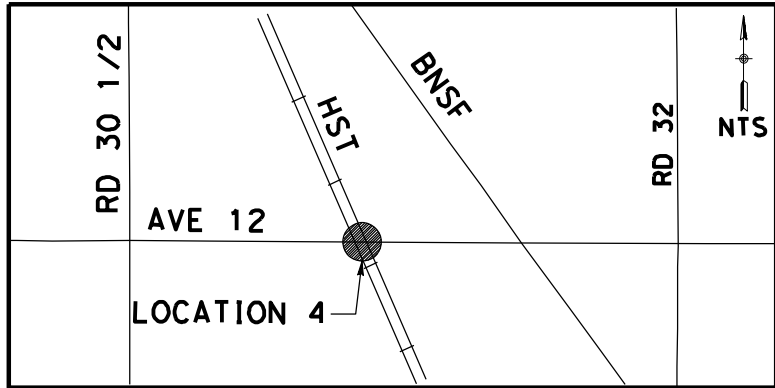
12/6/2012 6:25:25 PM \\usscri1p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\MF-CT-0012-A6.dgn

Huang

MATCH LINE STA 33+00  
SEE DRAWING CT0011-A6



CURVE DATA				
NO.	R	$\Delta$	T	V
③	3000.00'	8°42'44"	228.52'	456.17'
④	3000.00'	8°42'44"	228.52'	456.17'



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1009-A6 THROUGH CT1011-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

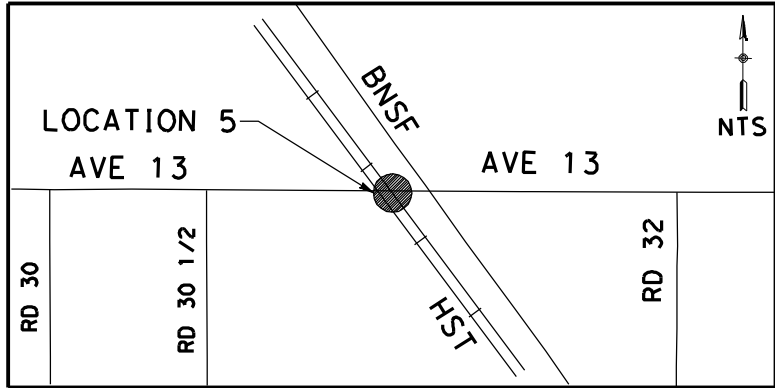
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
LAYOUT  
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0012-A7
SCALE AS SHOWN
SHEET NO. OF ###

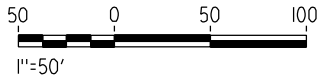
12/17/2012 ADDENDUM 7 - RFP HSR 11-16



2/16/2012 12:07:01 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\WF-CT-0013-A\_REV2.dgn  
GibsonR1



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

GRADE SEPARATION - AVENUE 13  
LAYOUT  
SHEET 1 OF 4

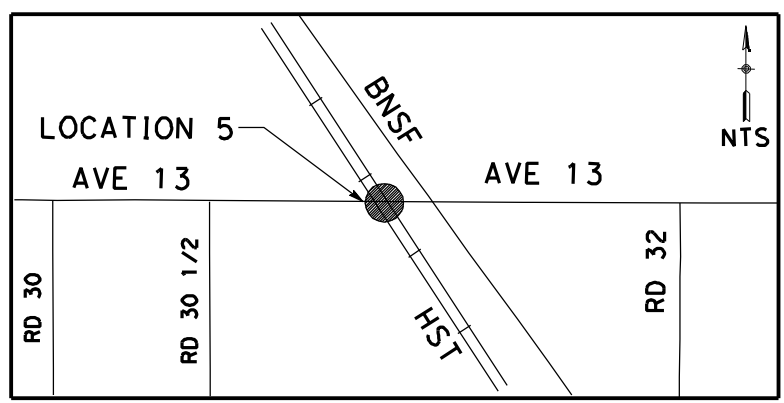
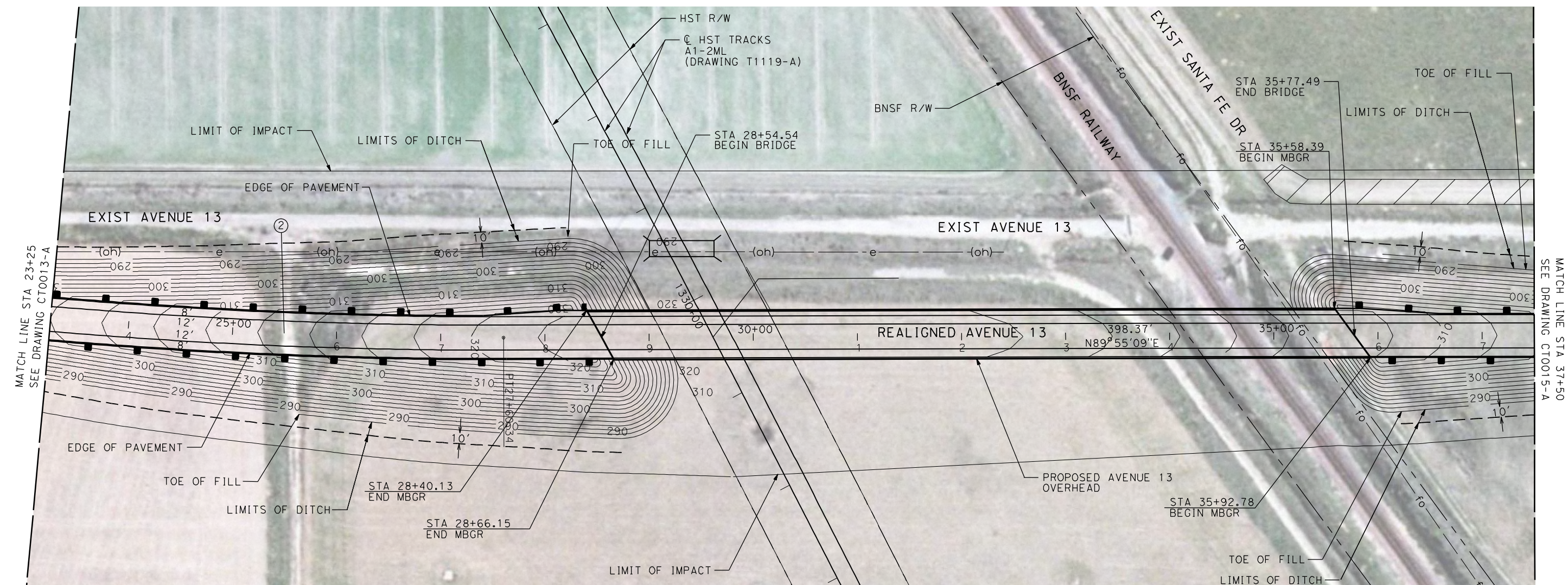
CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0013-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



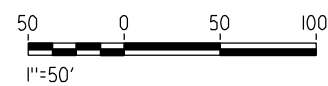
2/16/2012 12:07:24 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibson\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\WF-CT-0014-A\_REV2.dgn  
GibsonR1



CURVE DATA					
NO.	R	$\Delta$	T	L	V
②	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

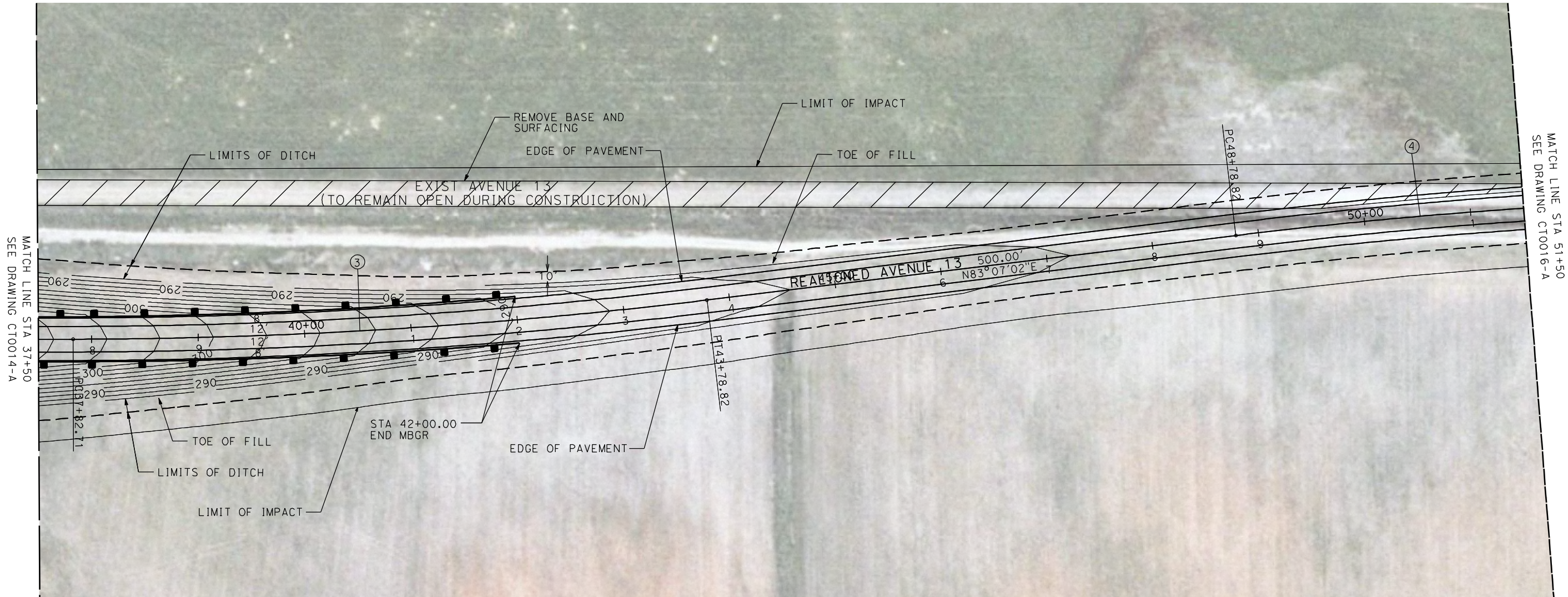
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

GRADE SEPARATION - AVENUE 13  
LAYOUT  
SHEET 2 OF 4

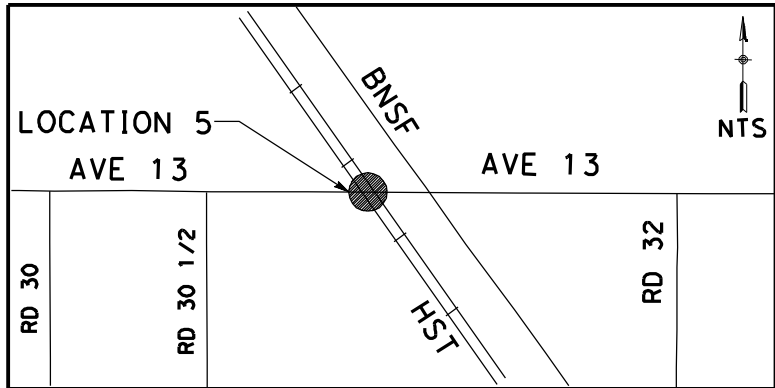
CONTRACT NO. HST06-007
DRAWING NO. CT0014-A
SCALE AS SHOWN
SHEET NO. OF ###



2/16/2012 12:07:49 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\WF-CT-0015-A\_REV2.dgn  
GibsonR1

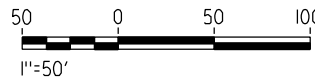


CURVE DATA					
NO.	R	$\Delta$	T	L	V
③	5000.00'	6°49'51"	298.41'	596.11'	45 MPH
④	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON

DRAWN BY  
H. PHAN

CHECKED BY  
J. ZANDIAN

IN CHARGE  
A. BOONE

DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

GRADE SEPARATION - AVENUE 13  
LAYOUT  
SHEET 3 OF 4

CONTRACT NO.  
HST06-007

DRAWING NO.  
CT0015-A

SCALE  
AS SHOWN

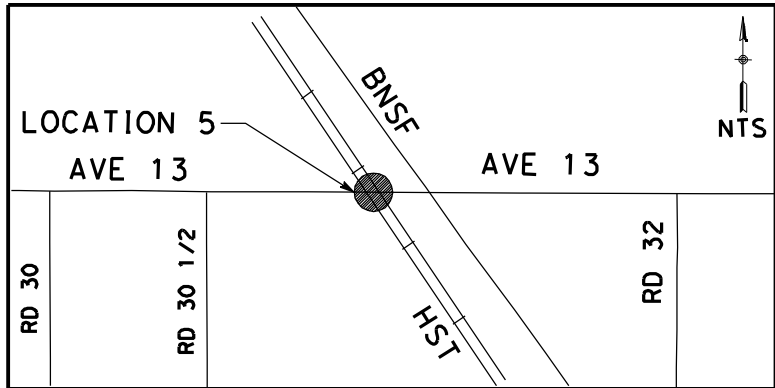
SHEET NO.  
OF ###



2/16/2012 12:08:14 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\A1\Rev2\WF-CT-0016-A\_REV2.dgn  
GibsonR1



CURVE DATA					
NO.	R	$\Delta$	T	L	V
④	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1012-A THROUGH CT1014-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



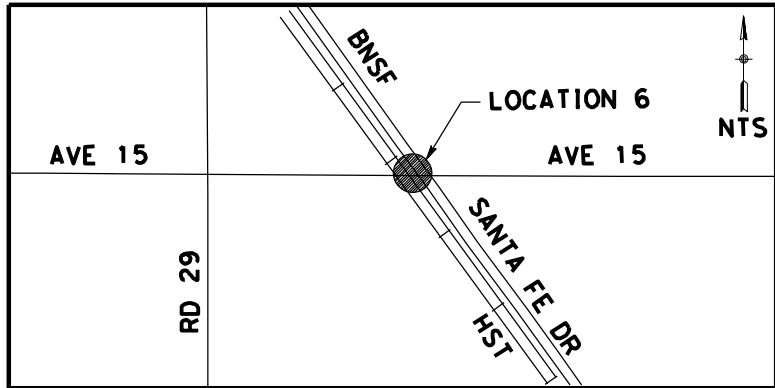
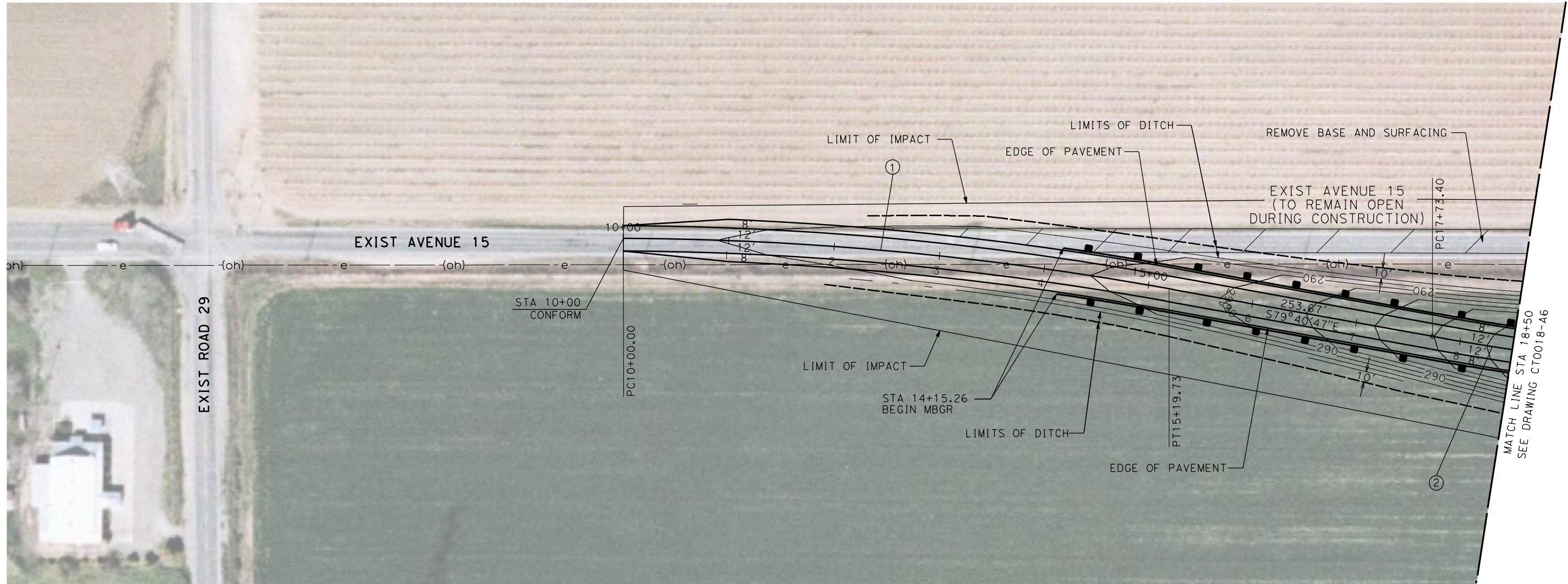
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

GRADE SEPARATION - AVENUE 13  
LAYOUT  
SHEET 4 OF 4

CONTRACT NO. HST06-007
DRAWING NO. CT0016-A
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:25:43 PM \\usscri1p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-0017-A6.dgn Huang



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A6 THROUGH CT1017-A6.



**REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16**

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15  
LAYOUT  
SHEET 1 OF 3

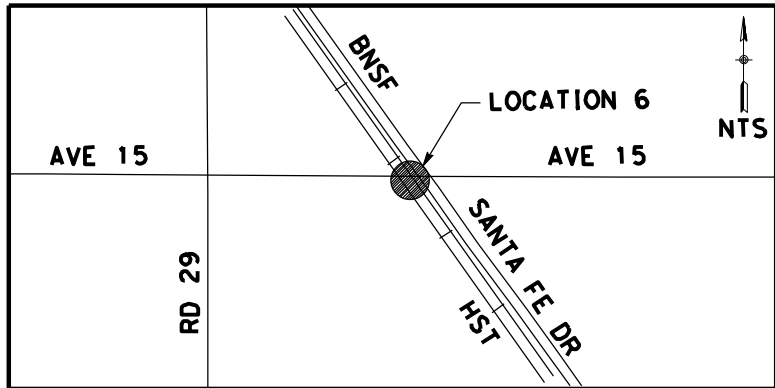
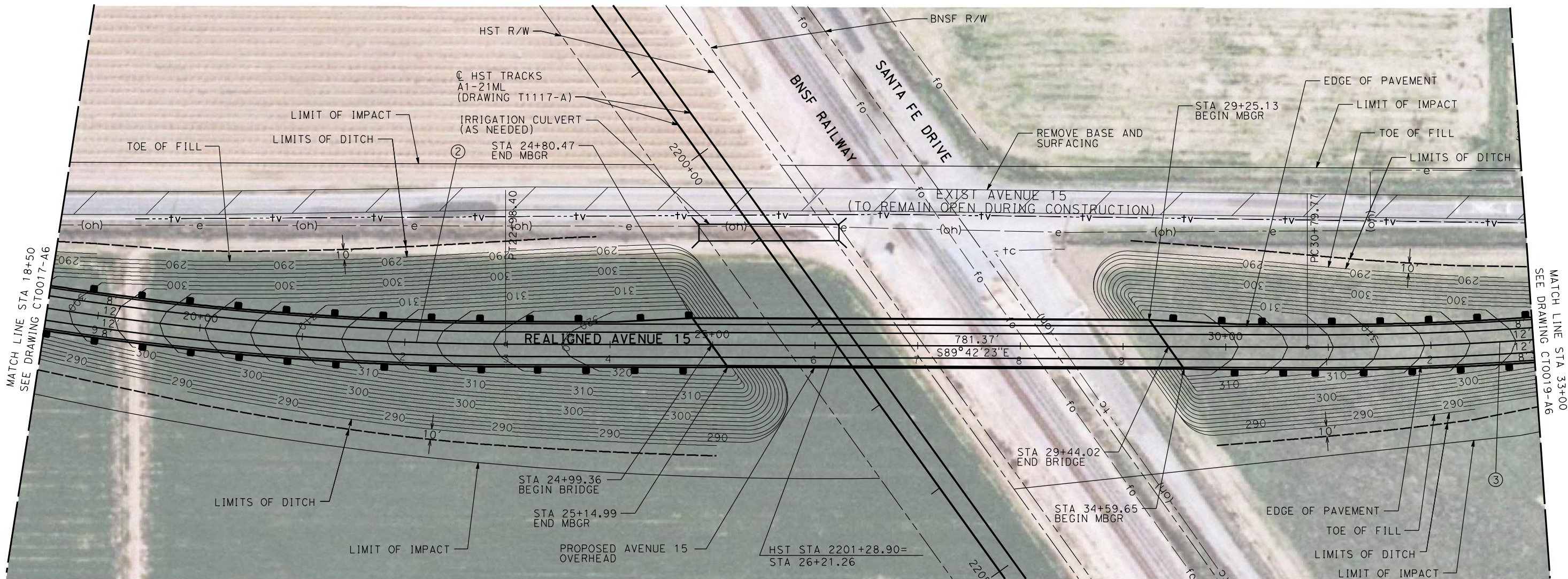
CONTRACT NO. HST06-007
DRAWING NO. CT0017-A7
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:26:09 PM \\usscri\p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-0018-A6.dgn Huang

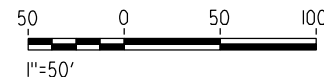


CURVE DATA					
NO.	R	$\Delta$	T	L	V
②	3000.00'	10°01'36"	263.17'	525.00'	45 MPH
③	3000.00'	9°32'57"	250.58'	500.00'	45 MPH



NOTE:

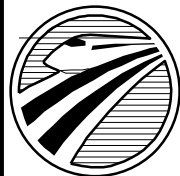
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A6 THROUGH CT1017-A6.



REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 02/17/2012



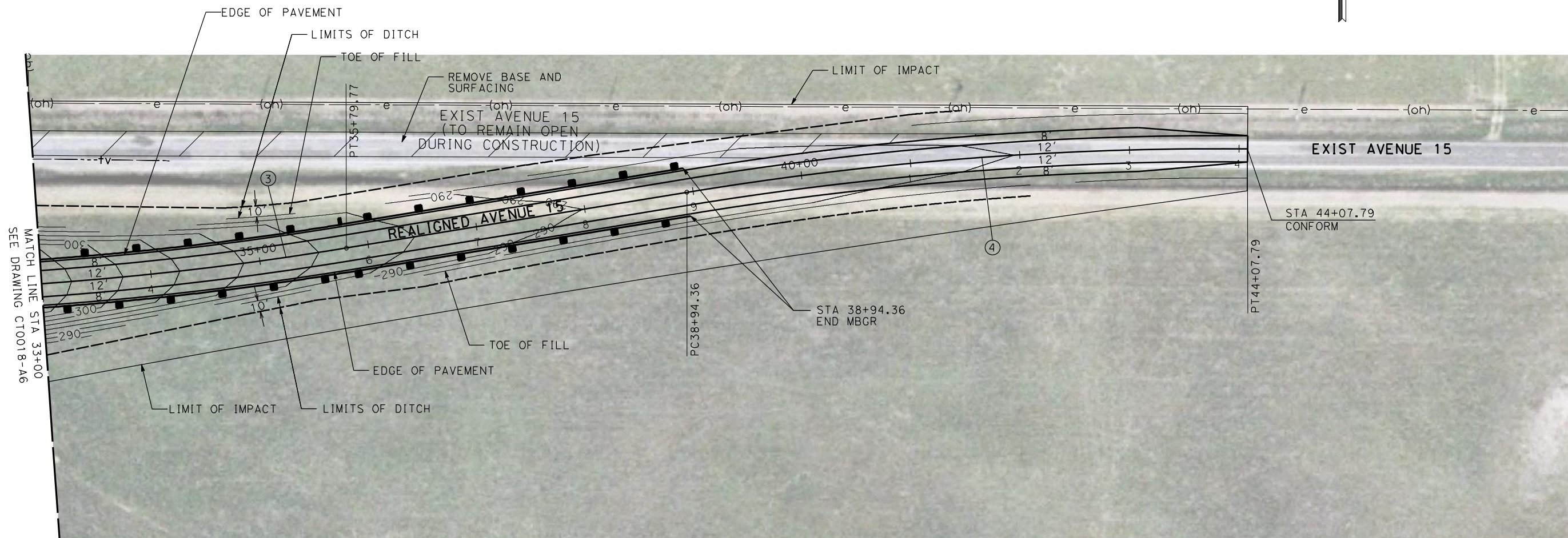
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0018-A7
SCALE AS SHOWN
SHEET NO. OF ###

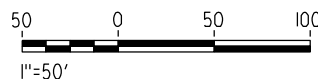
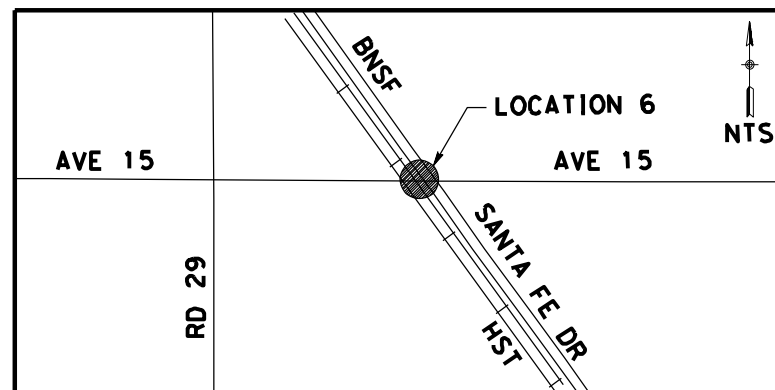


NO.	R	$\Delta$	T	L	V
③	3000.00'	9° 32' 57"	250.58'	500.00'	45 MPH
④	3000.00'	9° 48' 21"	257.34'	513.43'	45 MPH






NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1015-A6 THROUGH CT1017-A6.



# REPLACEMENT SHEET

## ADDENDUM 7 - RFP HSR 11-16

						DESIGNED BY R. GIBSON	<div> AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811</div> <div> CH2MHILL</div>	<div> CALIFORNIA HIGH-SPEED RAIL AUTHORITY</div>	<div>CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO</div> <div>BNSF MAIN LINE - (HYBRID) GRADE SEPARATION - AVENUE 15 LAYOUT SHEET 3 OF 3</div>	CONTRACT NO. HST06-007
					DRAWN BY H. PHAN	DRAWING NO. CT0019-A7				
					CHECKED BY A. SILVER	SCALE AS SHOWN				
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7	IN CHARGE A. BOONE				SHEET NO. OF ###
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 02/17/2012				

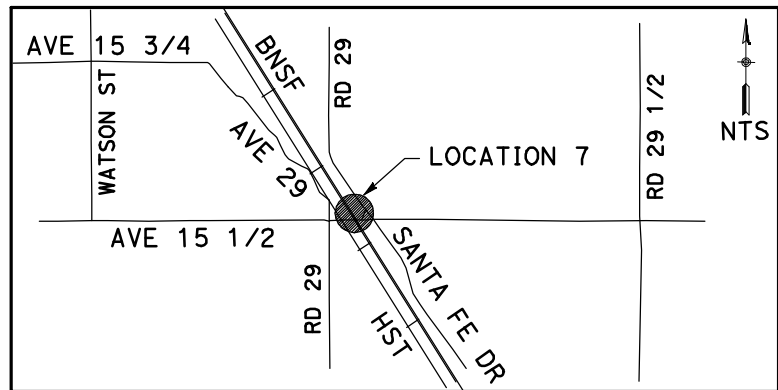
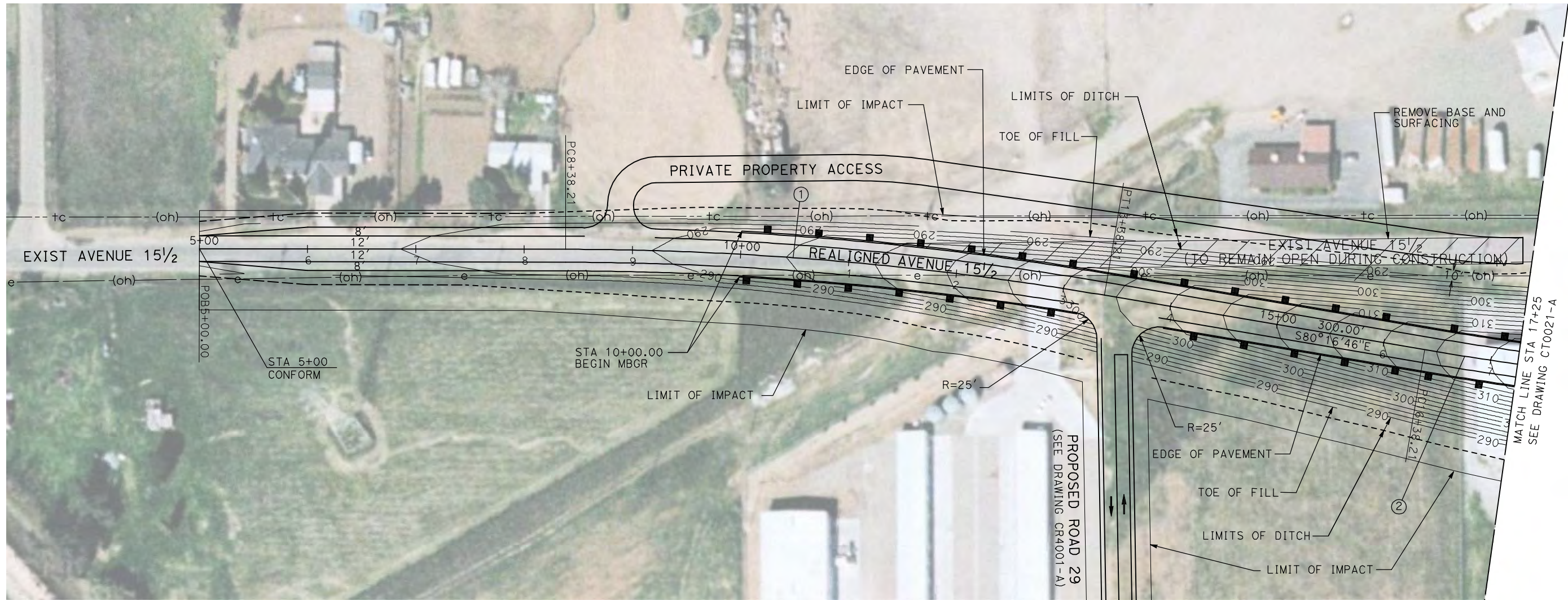


5/1/2011 1:34:49 PM I:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Layout\MF-CT-0020-A.dgn

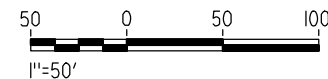
GibsonR1



CURVE DATA					
NO.	R	$\Delta$	T	L	V
①	3000.00'	9°32'57"	250.58'	500.00'	45 MPH
②	3000.00'	9°32'57"	250.58'	500.00'	45 MPH



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
LAYOUT  
SHEET 1 OF 3

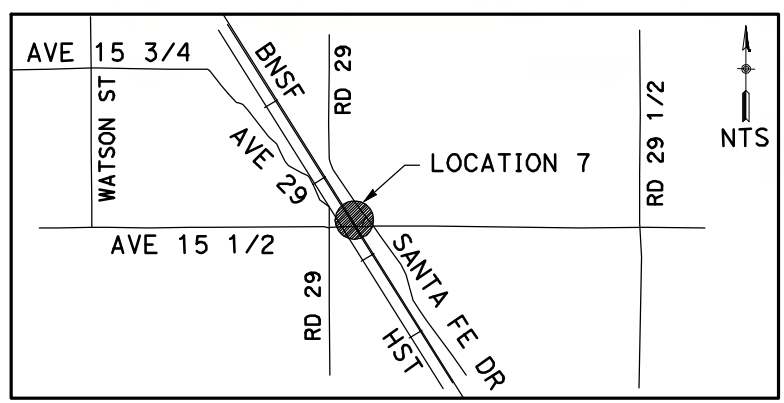
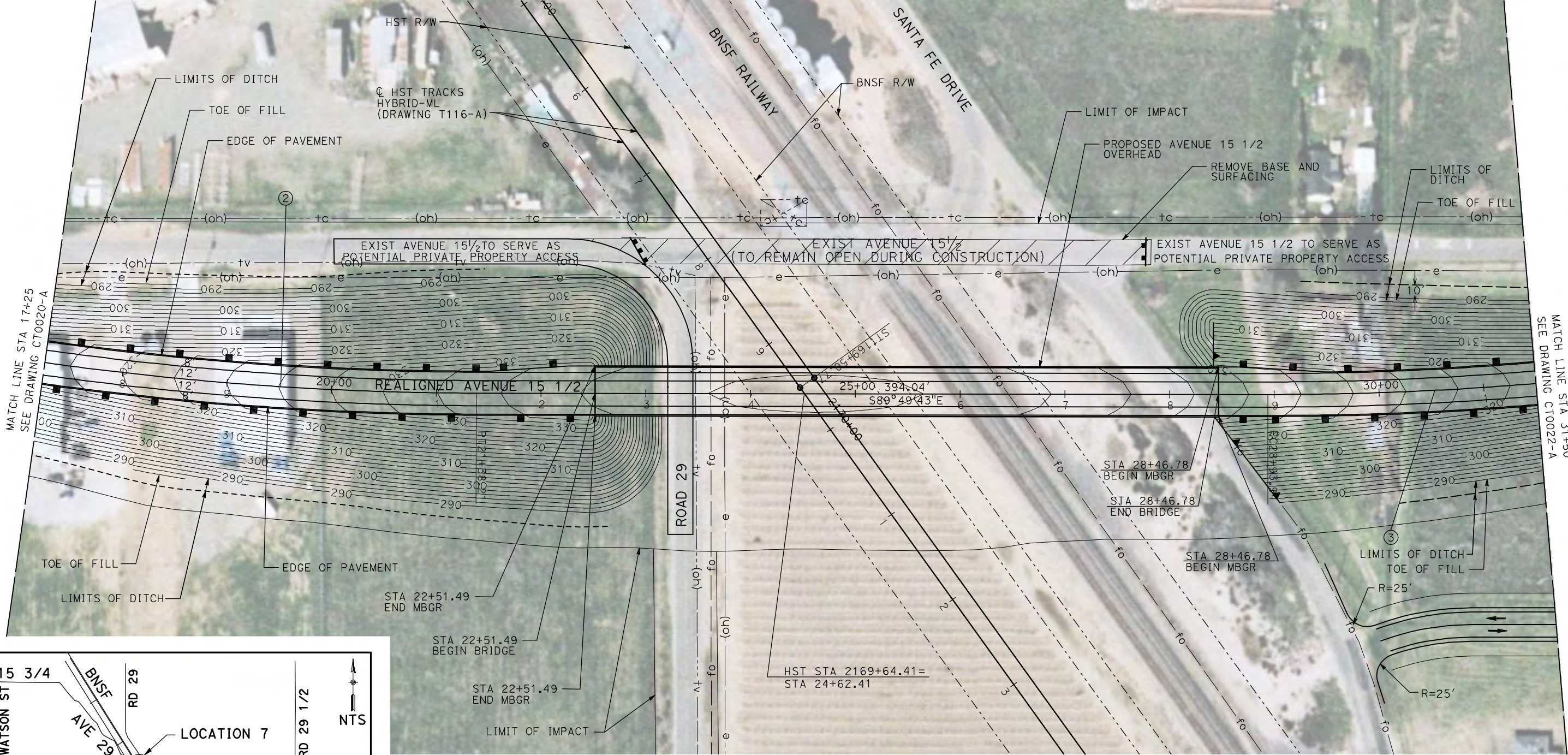
CONTRACT NO. HST06-007
DRAWING NO. CT0020-A
SCALE AS SHOWN
SHEET NO. OF ###



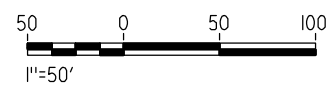
5/1/2011 1:34:56 PM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Layout\WF-CT-0021-A.dgn



CURVE DATA					
NO.	R	Δ	T	L	V
②	3000.00'	9°32'57"	250.58'	500.00'	45 MPH
③	3000.00'	9°32'57"	250.58'	500.00'	45 MPH



**NOTE:**  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.

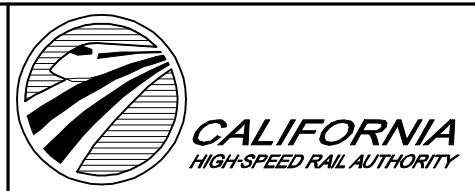


REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0021-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###

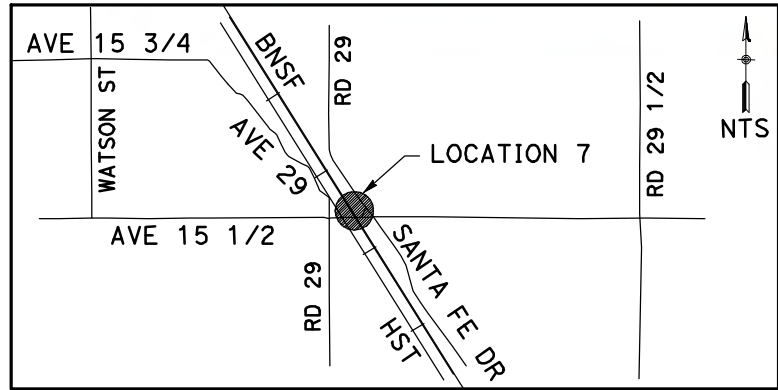


5/1/2011 1:35:05 PM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Layout\MF-CT-0022-A.dgn

GibsonR1

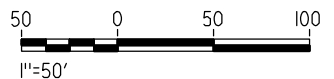


CURVE DATA					
NO.	R	$\Delta$	T	L	V
③	3000.00'	9°32'57"	250.58'	500.00'	45 MPH
④	3000.00'	9°32'57"	250.58'	500.00'	45 MPH



NOTE:

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1018-A THROUGH CT1020-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
LAYOUT  
SHEET 3 OF 3

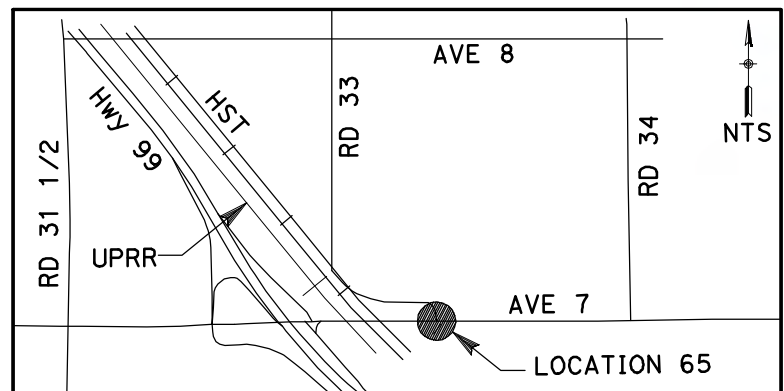
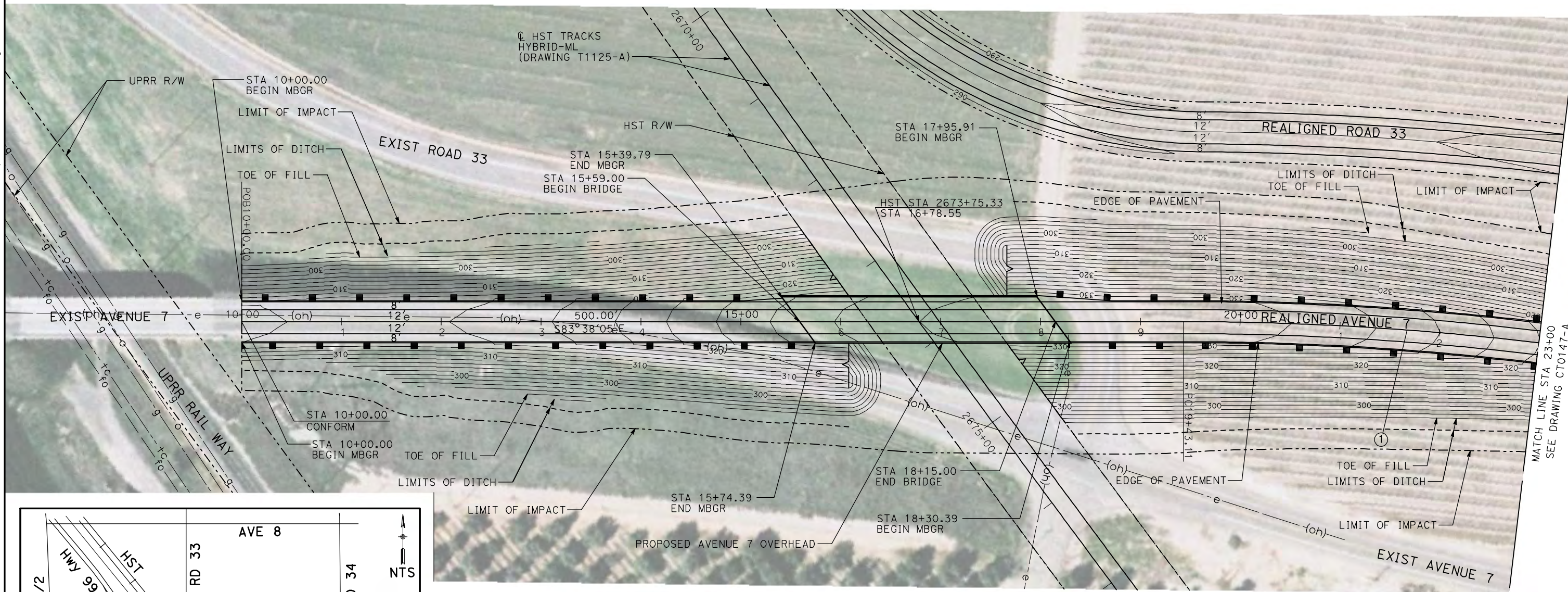
CONTRACT NO. HST06-007
DRAWING NO. CT0022-A
SCALE AS SHOWN
SHEET NO. OF ###



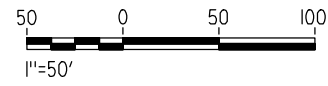
5/1/2011 1:46:47 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\Cost Reduction\Grade Sep Plan\WF-CT-0146-A.dgn

GibsonR1

CURVE DATA					
NO.	R	$\Delta$	T	L	V
①	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
LAYOUT  
SHEET 1 OF 3

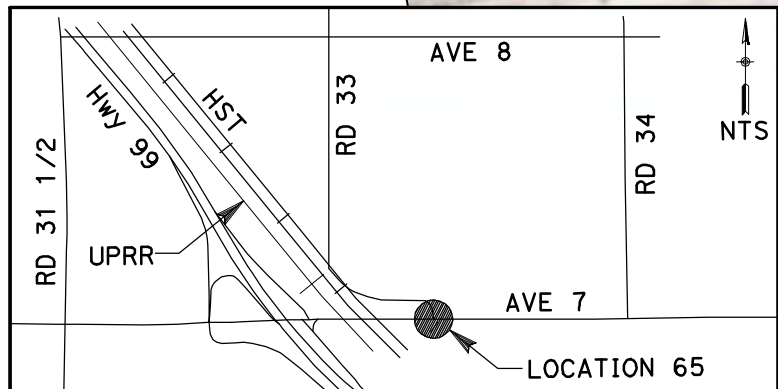
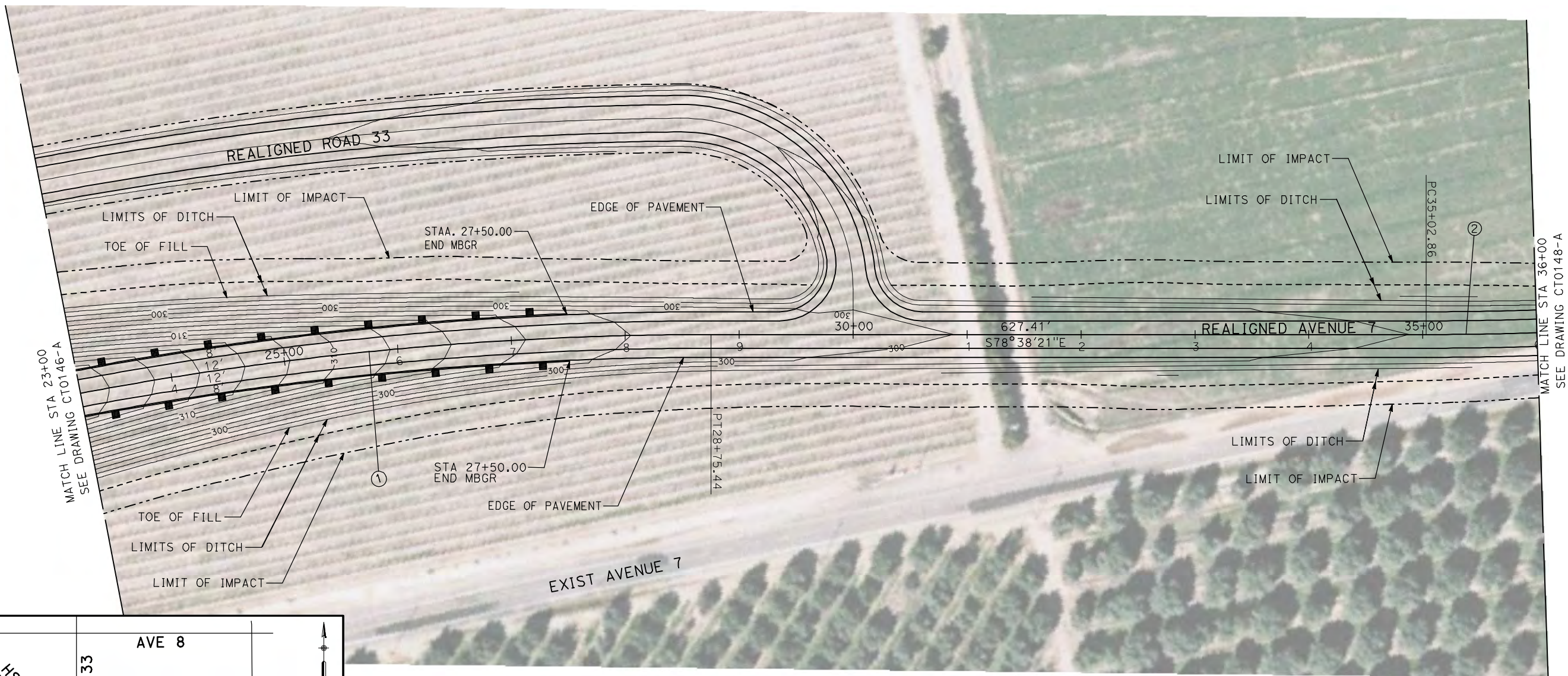
CONTRACT NO.  
HST06-007  
DRAWING NO.  
CT0146-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



5/1/2011 1:46:57 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\Cost Reduction\Grade Sep Plan\MF-CT-0147-A.dgn

GibsonR1

CURVE DATA					
NO.	R	$\Delta$	T	L	V
①	5000.00'	6°52'32"	300.36'	600.00'	45 MPH
②	3000.00'	12°10'29"	319.93'	637.46'	45 MPH



**NOTE:**

1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
LAYOUT  
SHEET 2 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0147-A
SCALE AS SHOWN
SHEET NO. OF ###

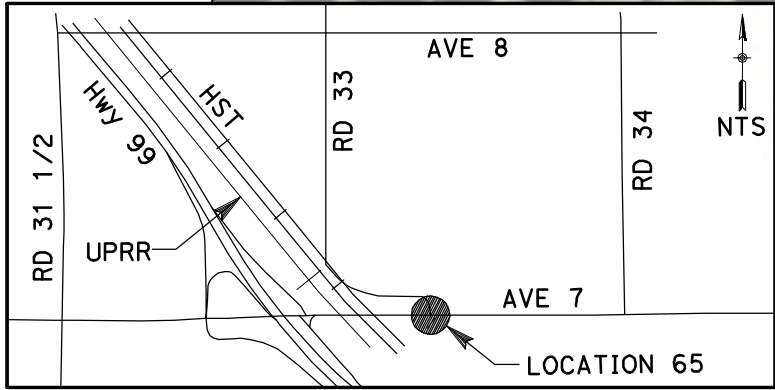
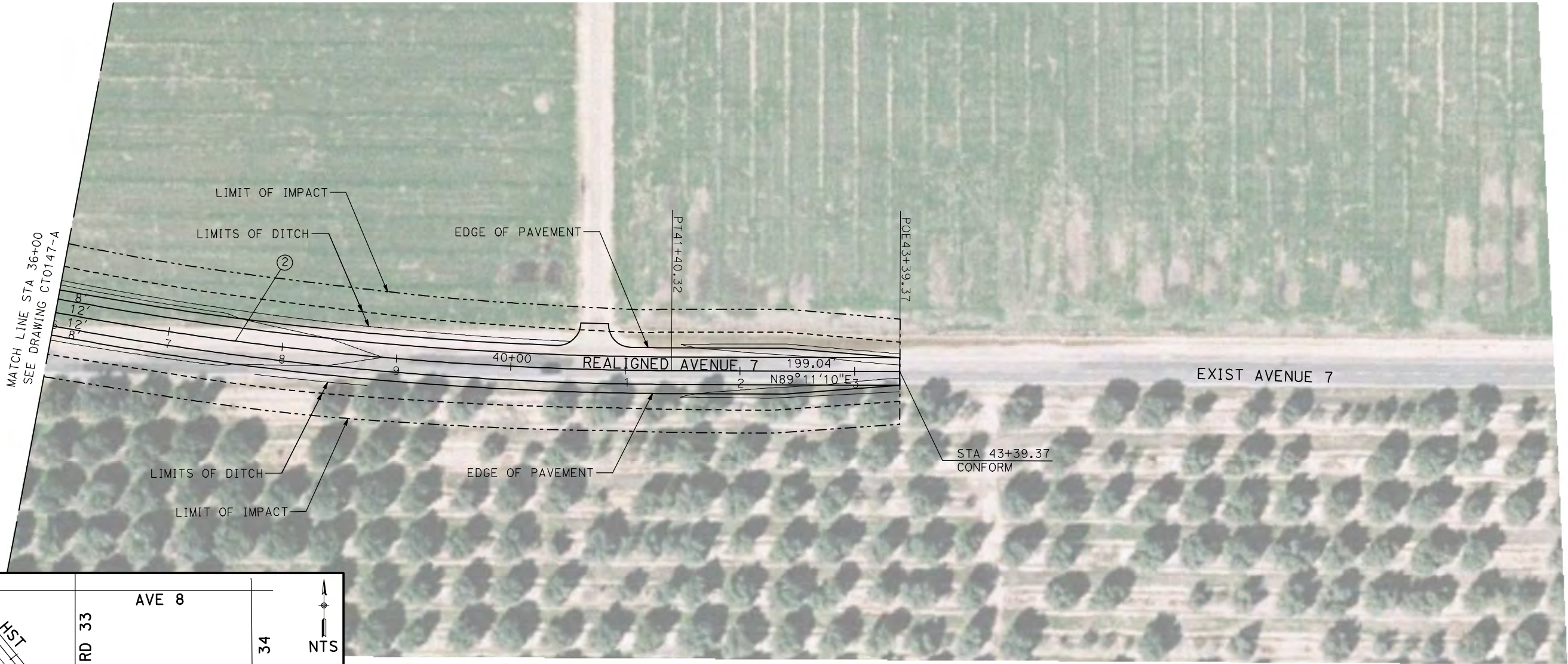


5/1/2011 1:47:04 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\Cost Reduction\Grade Sep Plan\MF-CT-0148-A.dgn

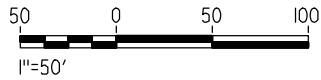
GibsonR1



CURVE DATA					
NO.	R	$\Delta$	T	L	V
②	5000.00'	6°52'32"	300.36'	600.00'	45 MPH



NOTE:  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT1146-A THROUGH CT1148-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY H. PHAN
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

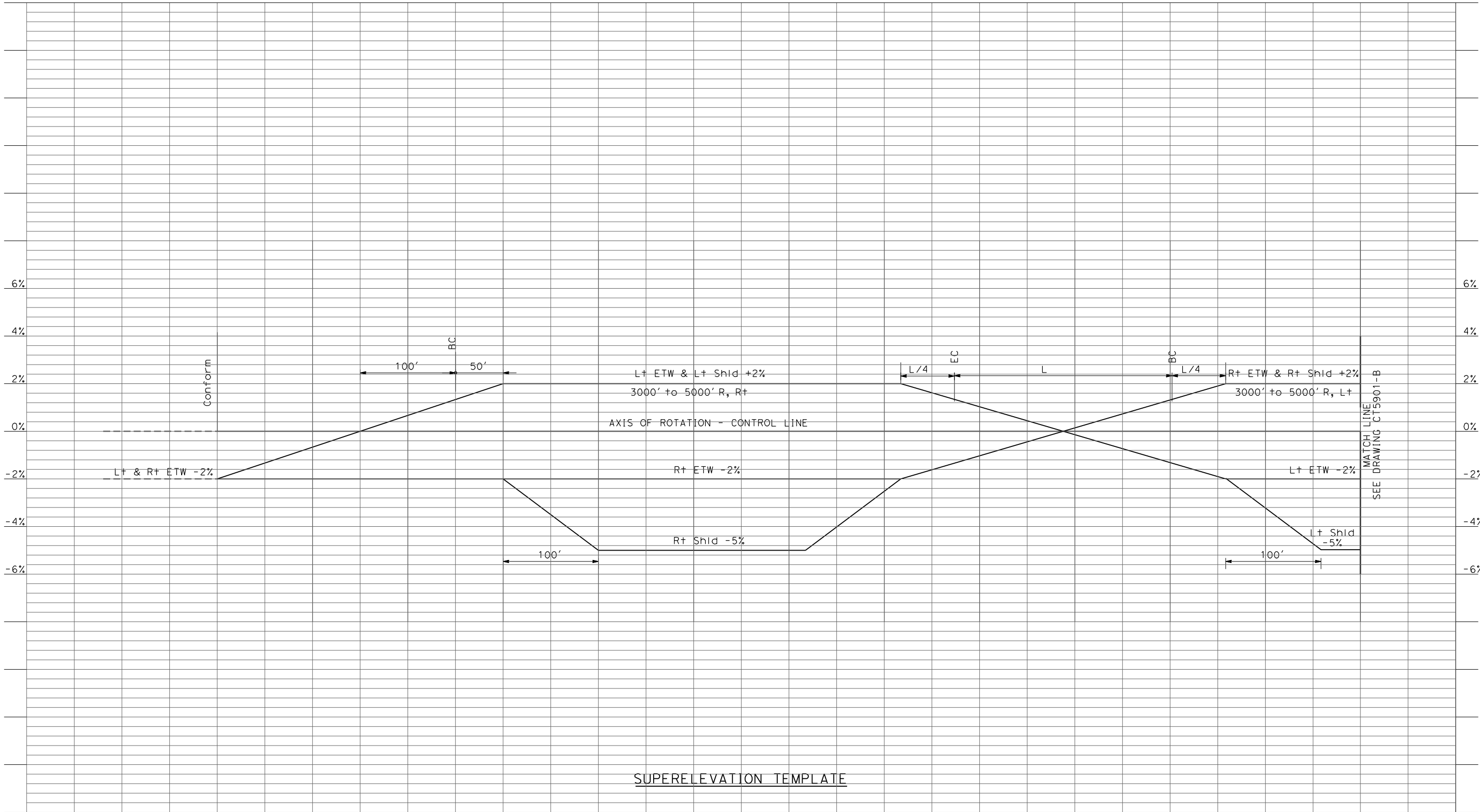
**NOT FOR**  
**CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
LAYOUT  
SHEET 3 OF 3

CONTRACT NO. HST06-007
DRAWING NO. CT0148-A
SCALE AS SHOWN
SHEET NO. OF ###

4/27/2011 7:01:50 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid grade separation\Profile\CT5900-B.dgn  
o:\e\ed



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011



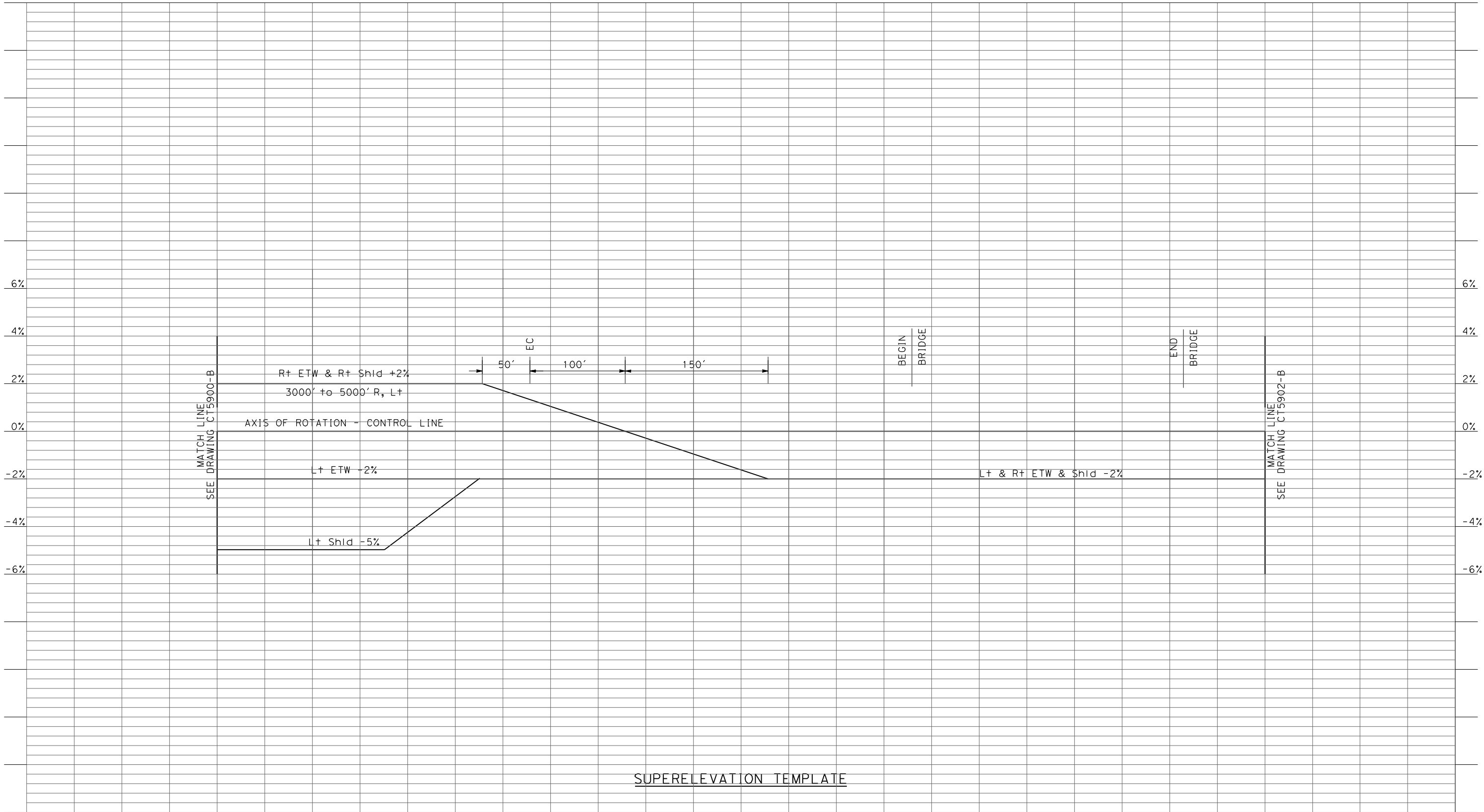
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
UPRR/SR99 - (HYBRID)  
GRADE SEPARATION  
SUPERELEVATION TEMPLATE  
SHEET 1 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5900-B
SCALE AS SHOWN
SHEET NO. ### OF ###



4/27/2011 7:01:53 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid grade separation\Profile\CT5901-B.dgn  
oyeled



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

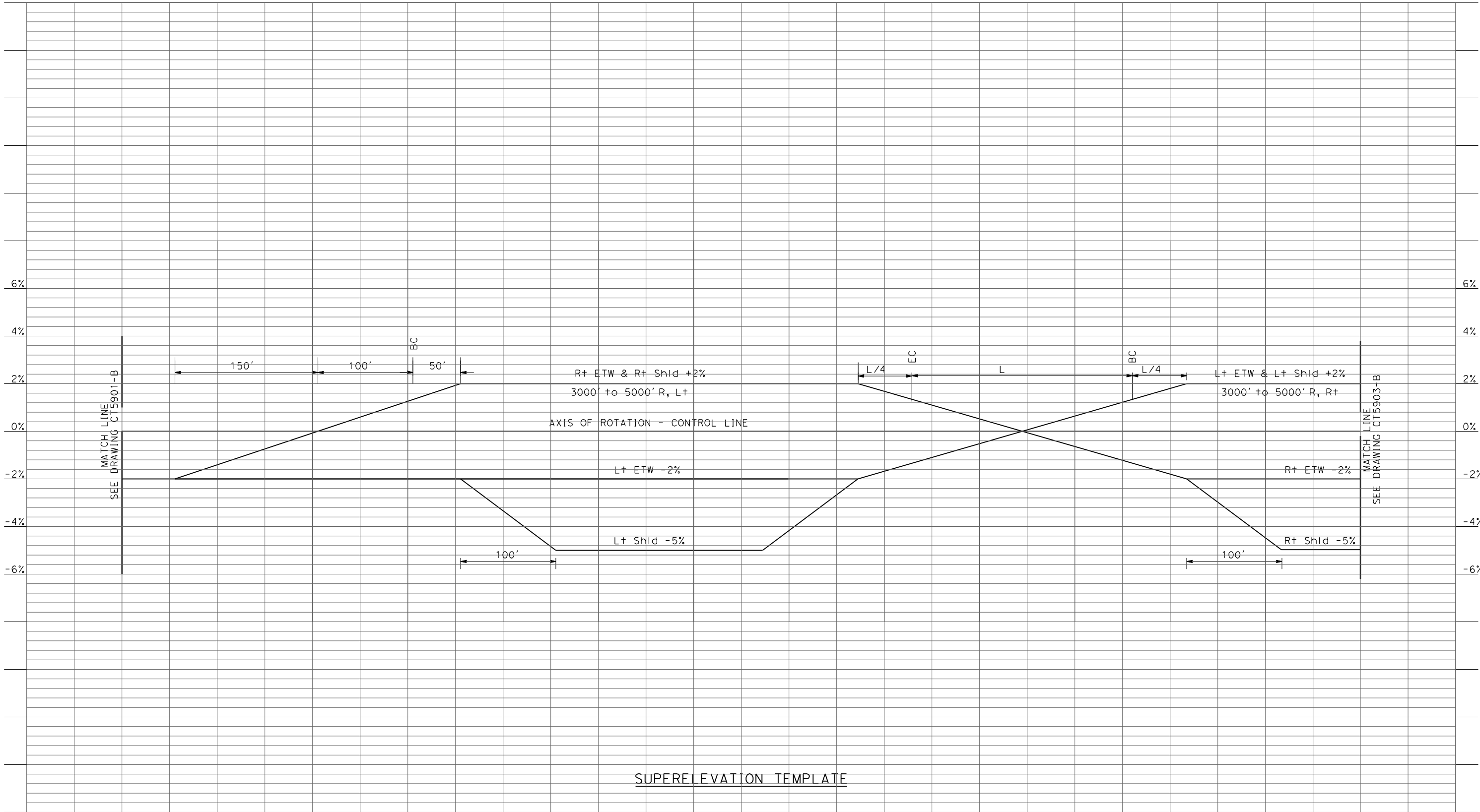


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
UPRR/SR99 - (HYBRID)  
GRADE SEPARATION  
SUPERELEVATION TEMPLATE  
SHEET 2 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5901-B
SCALE AS SHOWN
SHEET NO. ### OF ###

4/27/2011 7:01:56 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid grade separation\Profile\CT5902-B.dgn  
oyleed



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011



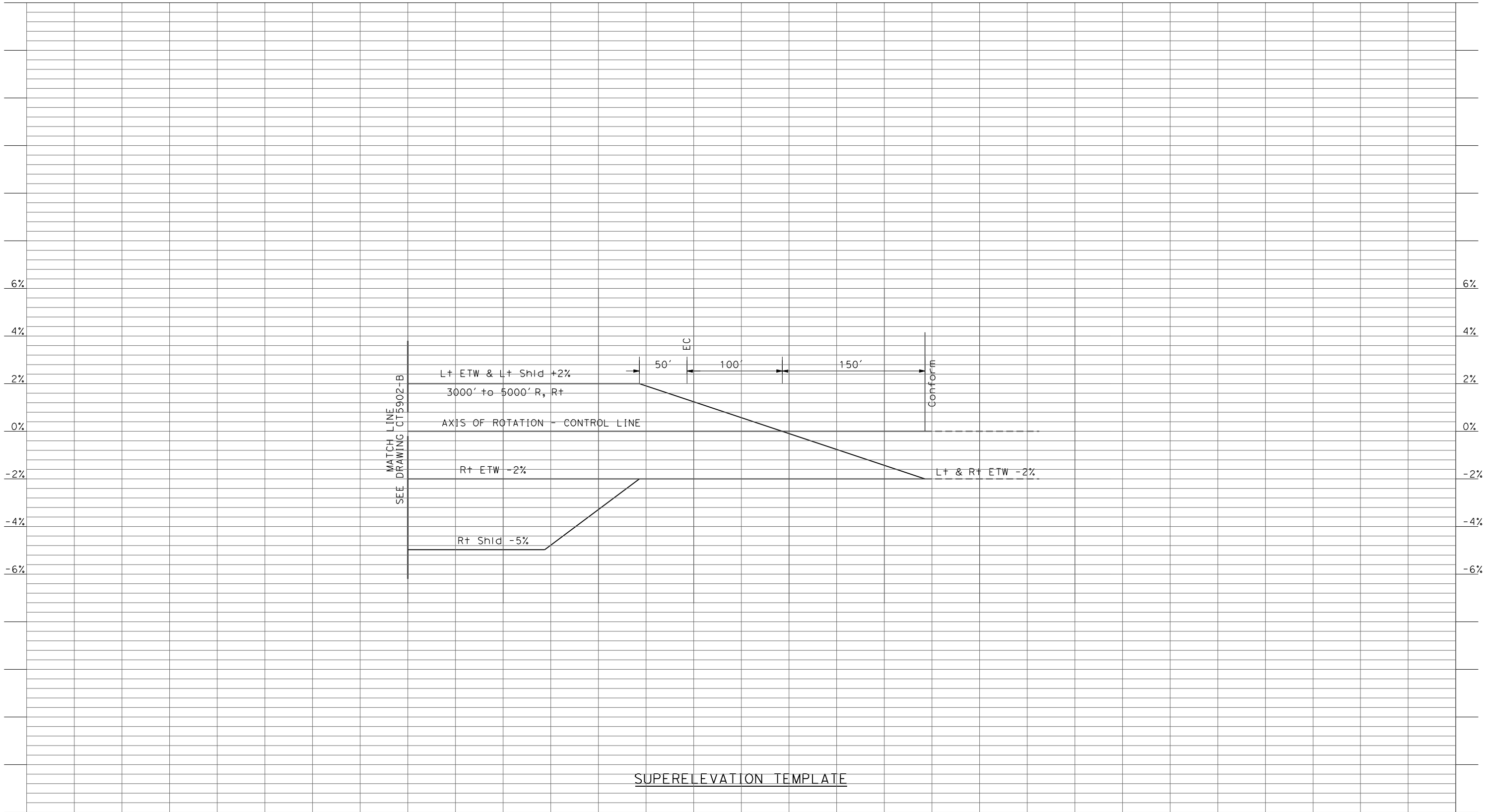
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
UPRR/SR99 - (HYBRID)  
GRADE SEPARATION  
SUPERELEVATION TEMPLATE  
SHEET 3 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5902-B
SCALE AS SHOWN
SHEET NO. ### OF ###



4/27/2011 7:02:00 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 1b - hybrid grade separation\Profile\CT5903-B.dgn  
oyed



SUPERELEVATION TEMPLATE

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011



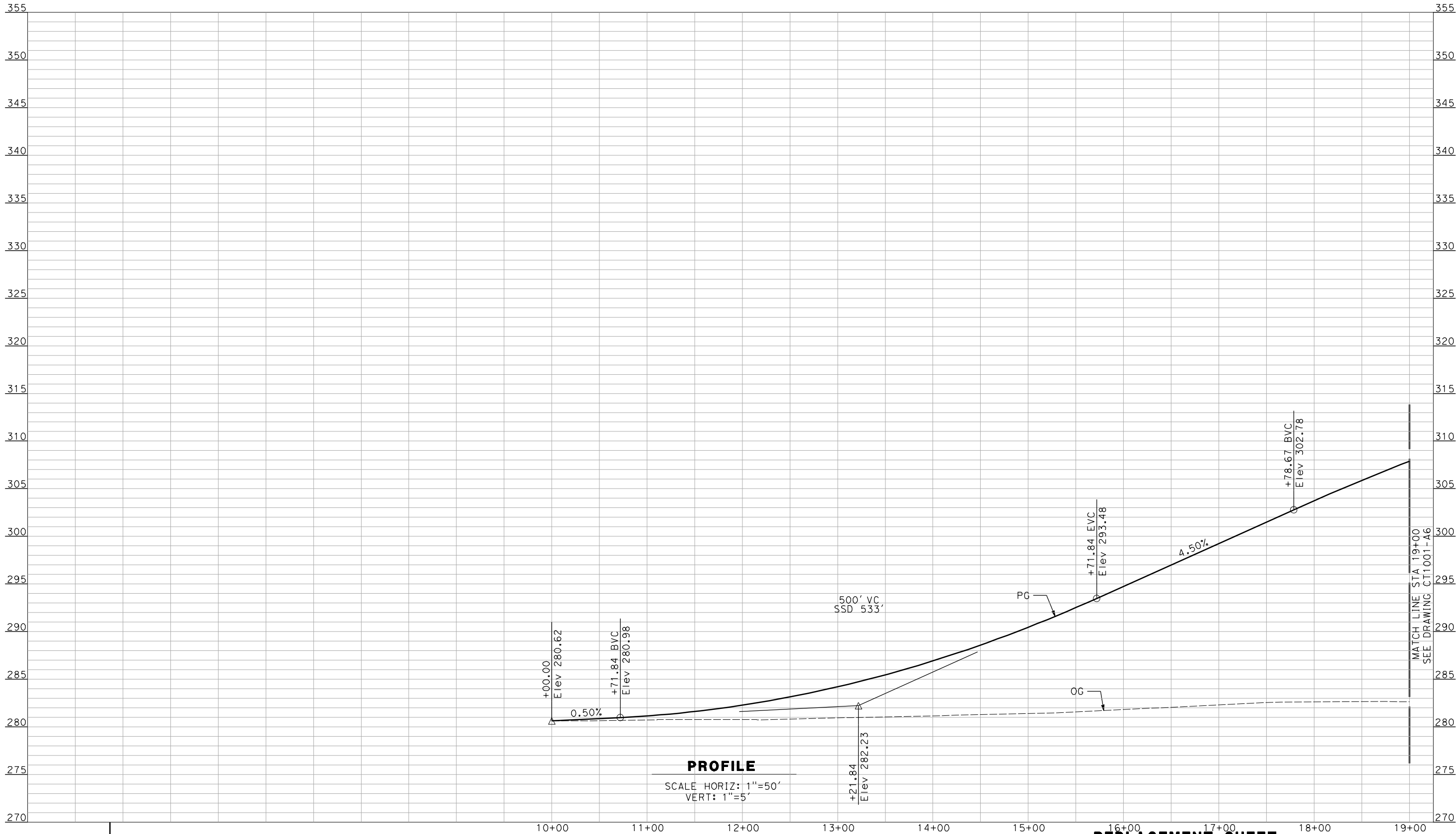
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
UPRR/SR99 - (HYBRID)  
GRADE SEPARATION  
SUPERELEVATION TEMPLATE  
SHEET 4 OF 4

CONTRACT NO. HSR06-007
DRAWING NO. CT5903-B
SCALE AS SHOWN
SHEET NO. ### OF ###

12/6/2012 6:27:57 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1000-A6.dgn

Huang



**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011



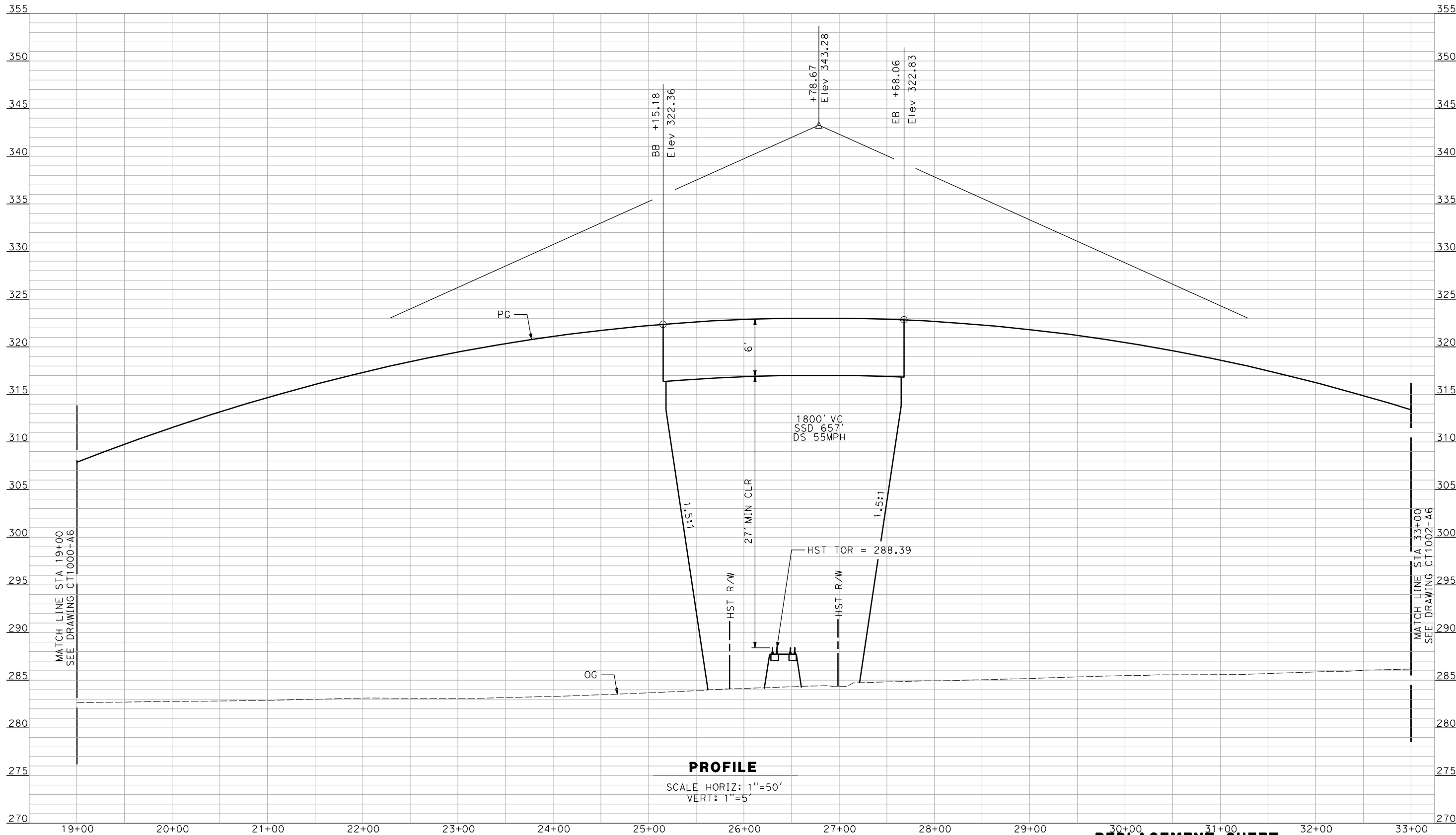
CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
PROFILE  
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1000-A7
SCALE AS SHOWN
SHEET NO. OF ###



12/6/2012 6:28:12 PM \\usscri1p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1001-A6.dgn



**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

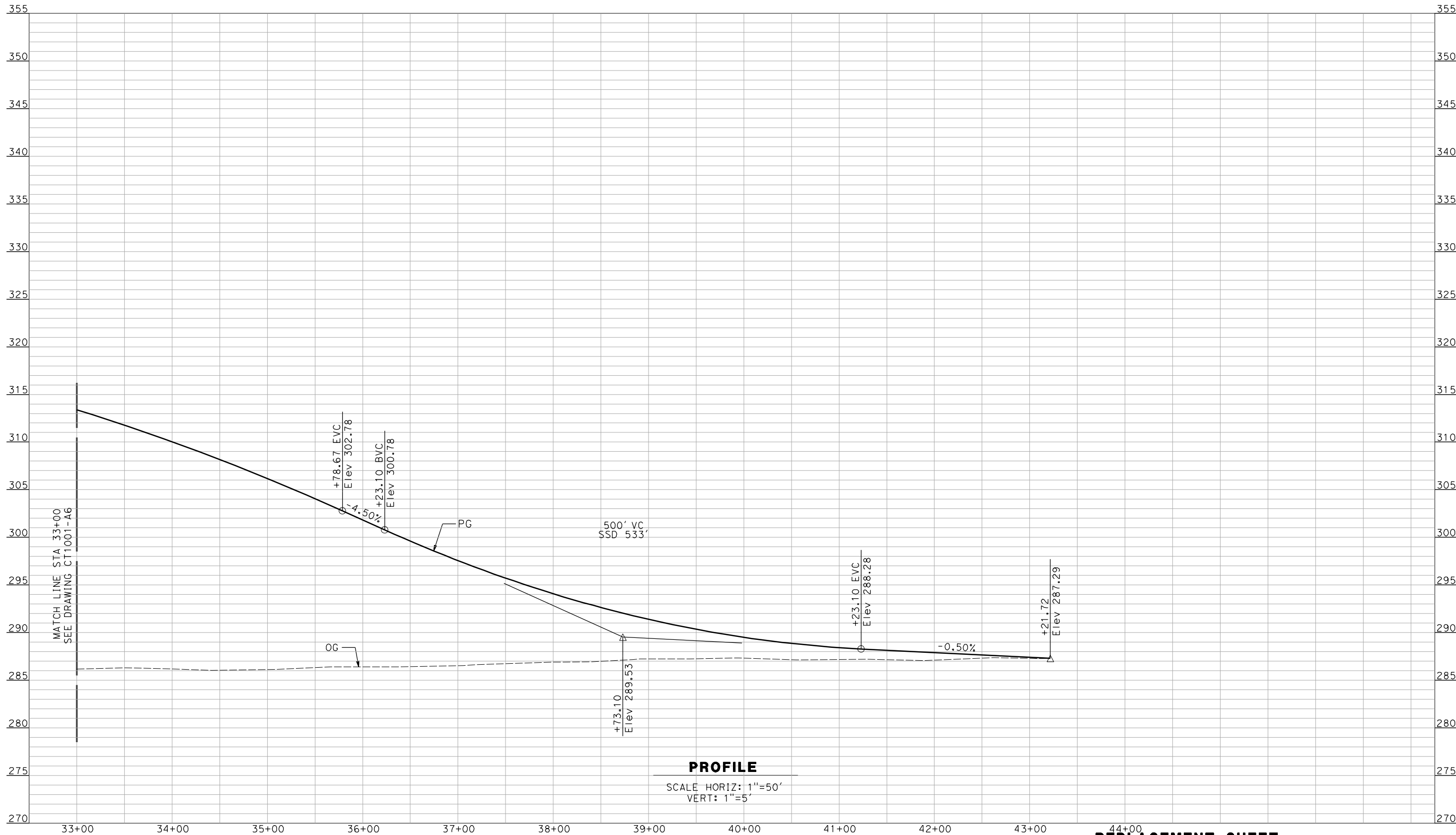
DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
PROFILE  
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1001-A7
SCALE AS SHOWN
SHEET NO. OF ###

12/6/2012 6:28:26 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\MF-CT-1002-A6.dgn Huang



**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

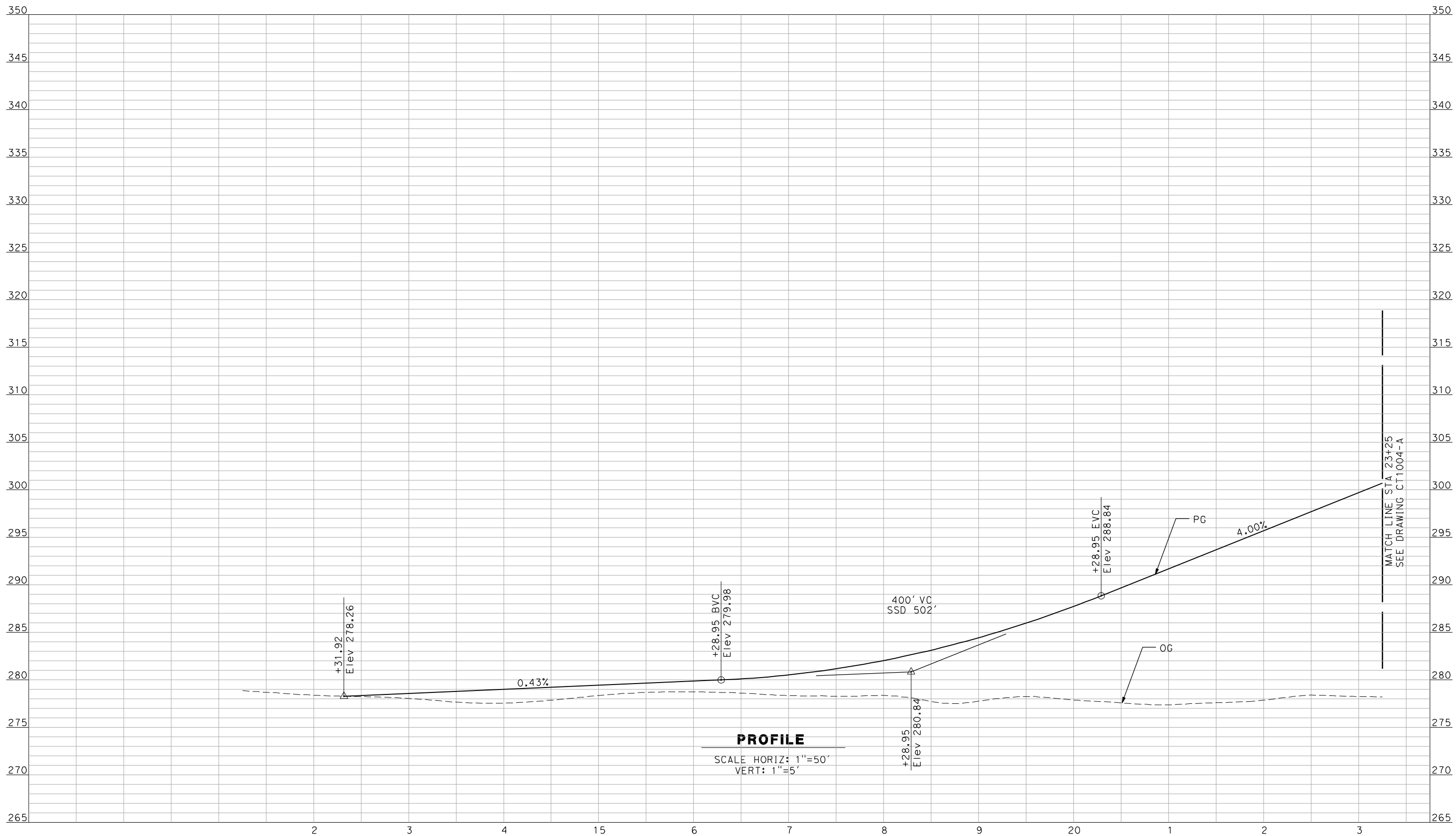
DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 9  
PROFILE  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1002-A7
SCALE AS SHOWN
SHEET NO. OF ###





NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

# CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO

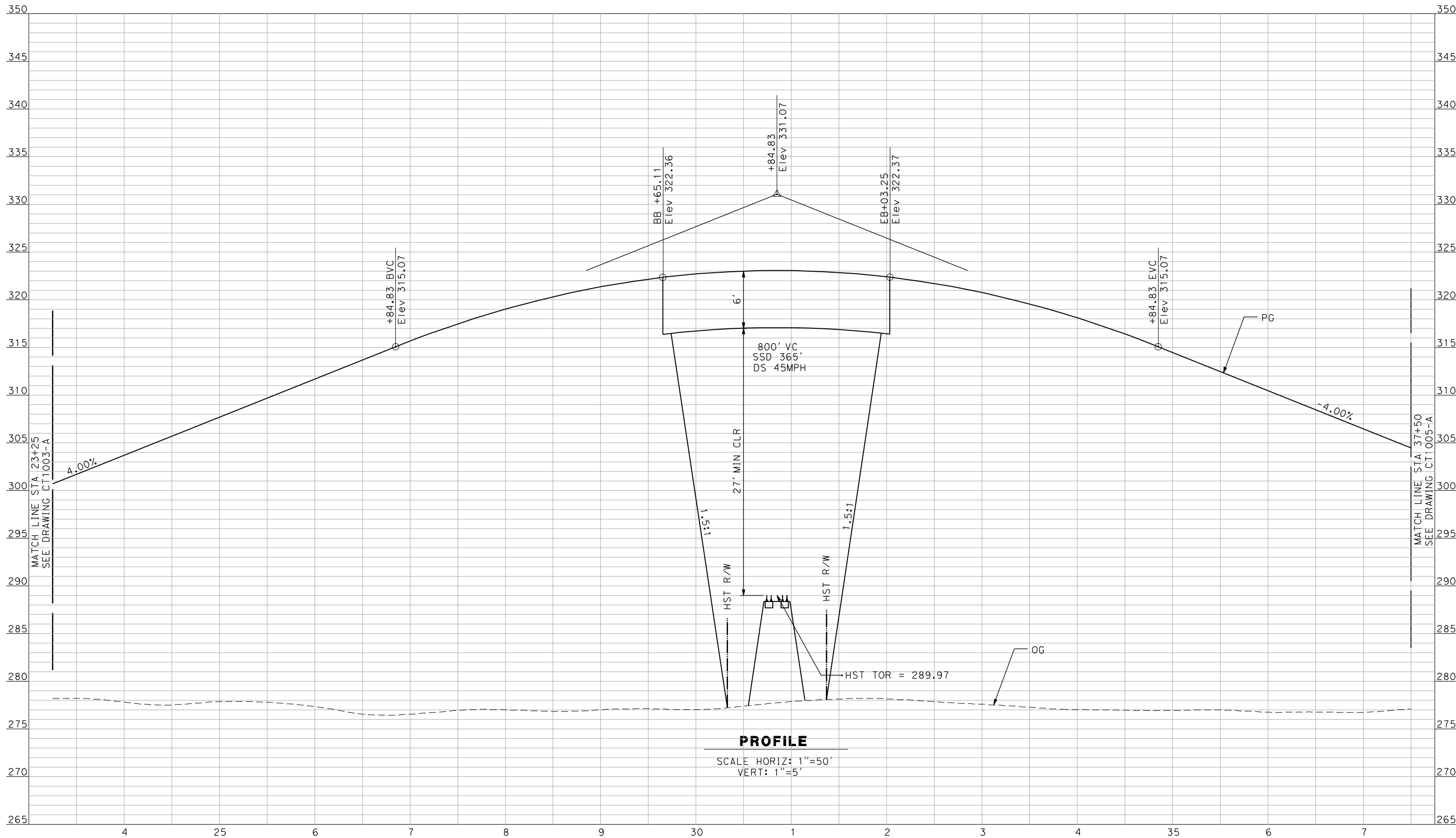
BNSF MAIN LINE - AVE 21 WYE  
GRADE SEPARATION - AVENUE 10  
PROFILE  
SHEET 1 OF 3

CONTRACT NO.	HSR06-007
DRAWING NO.	CT1003-A
SCALE	AS SHOWN
SHEET NO.	### OF ###

I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PROFILES\A1\Rev2\WF-CT-1004-A\_REV2.dgn

GibsonR1

2/16/2012 12:10:26 PM



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

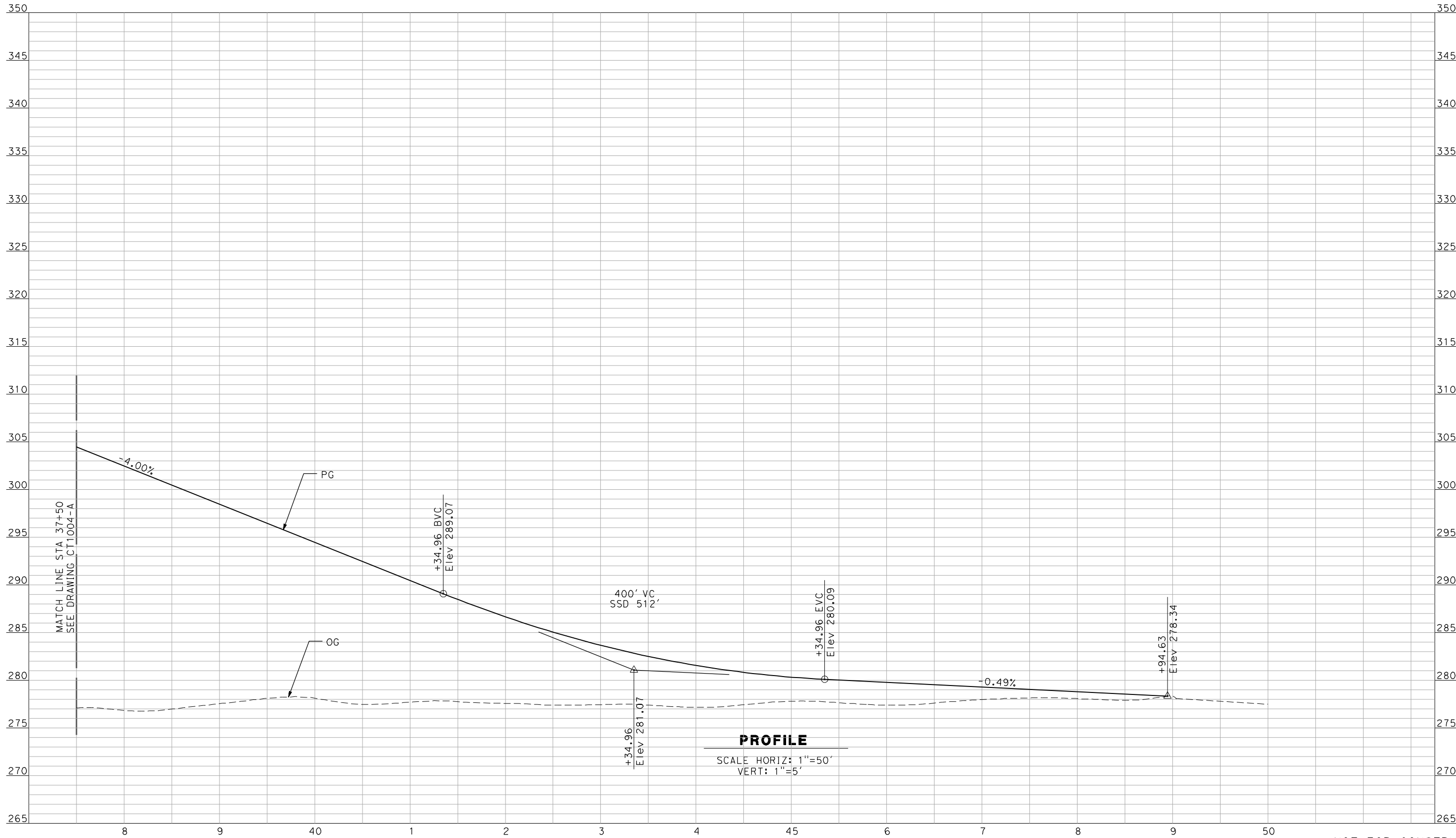
BNSF MAIN LINE - AVE 21 WYE  
GRADE SEPARATION - AVENUE 10  
PROFILE  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1004-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



2/16/2012 12:10:52 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1 - 15% Plans\CADD\Sheet\PROFILES\A1\Rev2\WF-CT-1005-A\_REV2.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

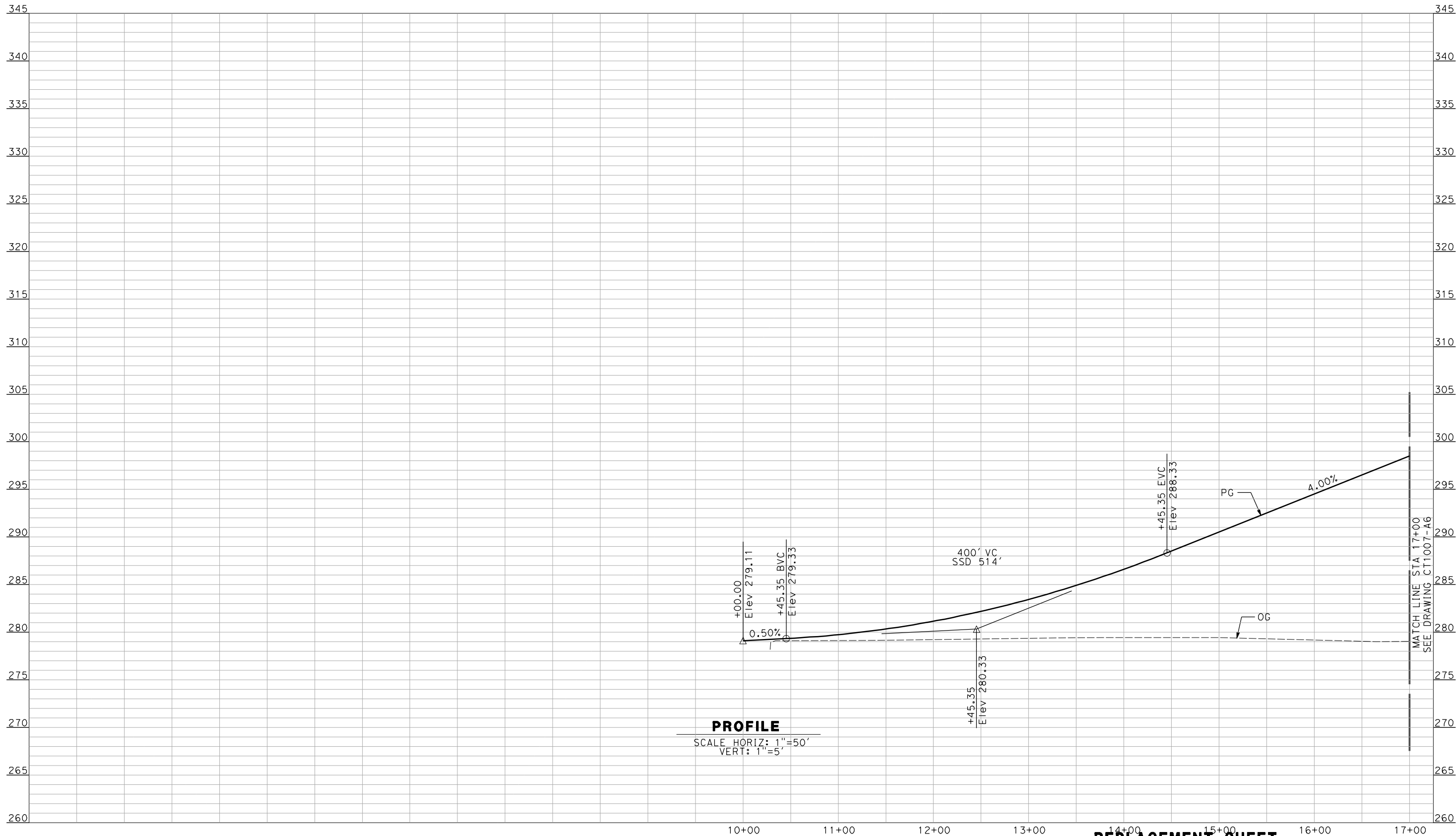
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

BNSF MAIN LINE - AVE 21 WYE  
GRADE SEPARATION - AVENUE 10  
PROFILE  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1005-A
SCALE AS SHOWN
SHEET NO. ### OF ###

12/6/2012 6:29:04 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1006-A6.dgn

Huang



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 11  
PROFILE  
SHEET 1 OF 3

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

CONTRACT NO.  
HSR06-007

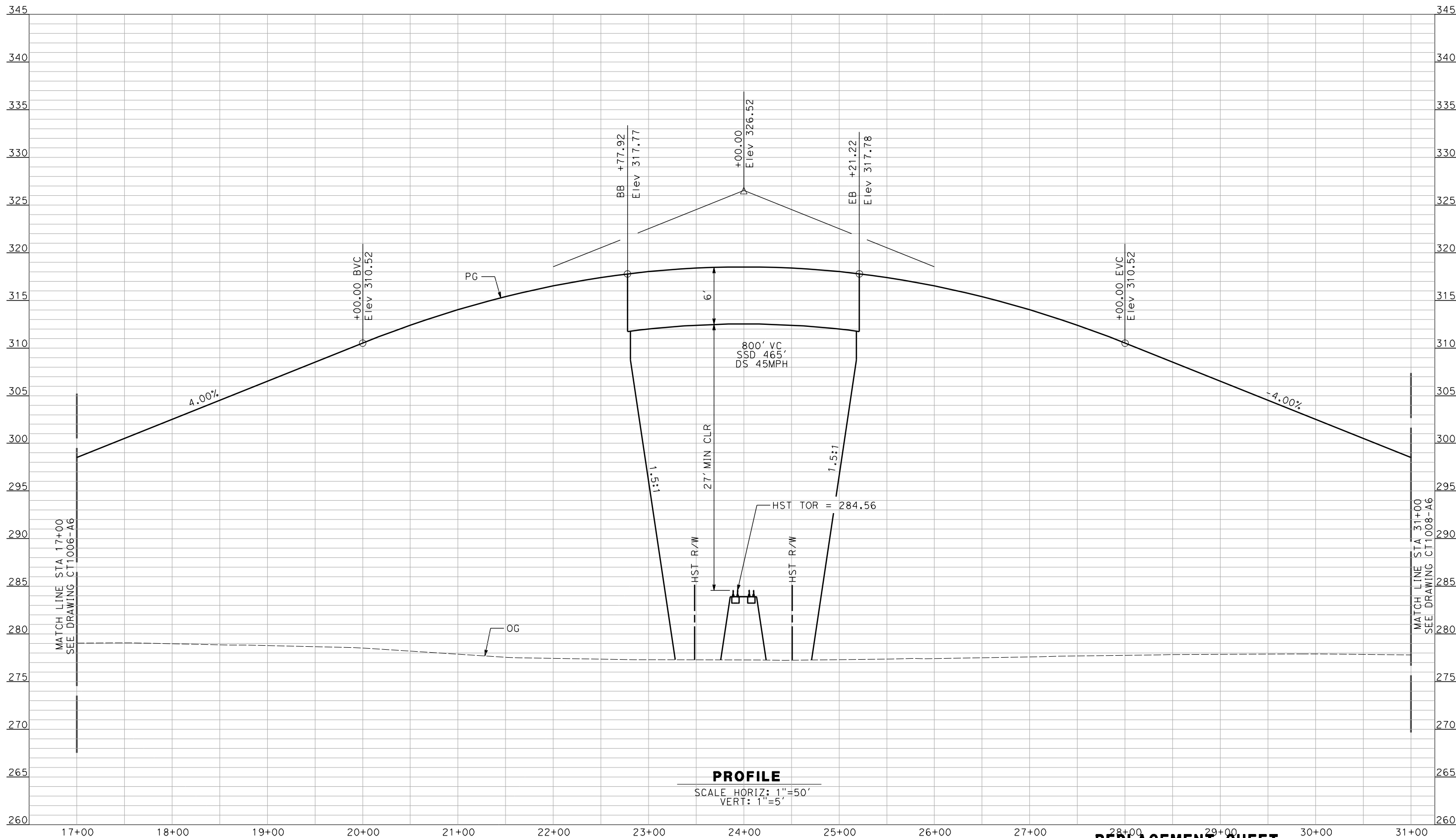
DRAWING NO.  
CT1006-A7

SCALE  
AS SHOWN

SHEET NO.  
OF ###



12/6/2012 6:29:21 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501.1 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1007-A6.dgn



**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

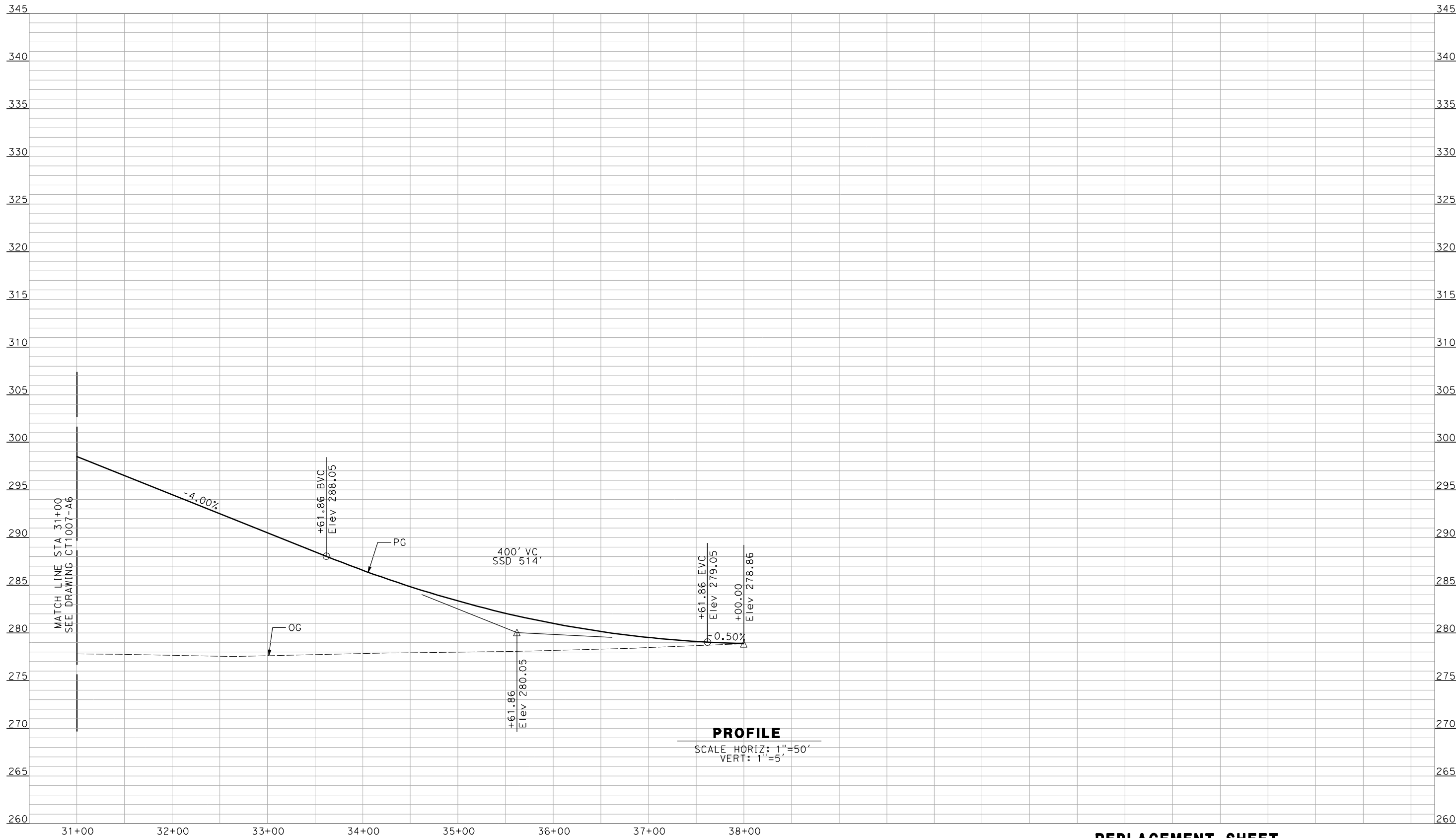


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 11  
PROFILE  
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1007-A7
SCALE AS SHOWN
SHEET NO. OF ###

12/6/2012 6:29:36 PM \\usscrip001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1008-A6.dgn Huang



**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 11  
PROFILE  
SHEET 3 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1008-A7  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

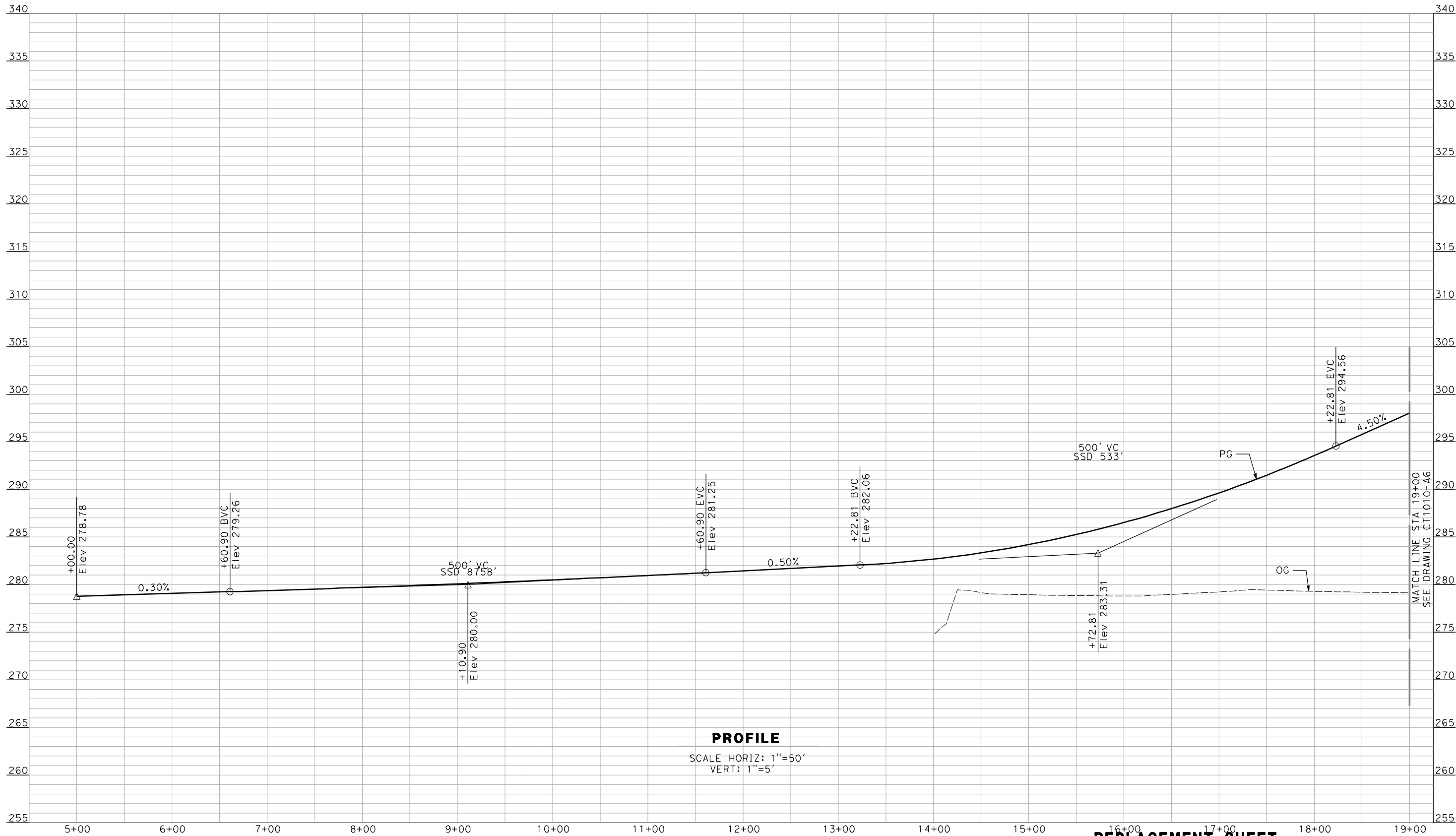


REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7



12/6/2012 6:29:52 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1009-A6.dgn

Huang



**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

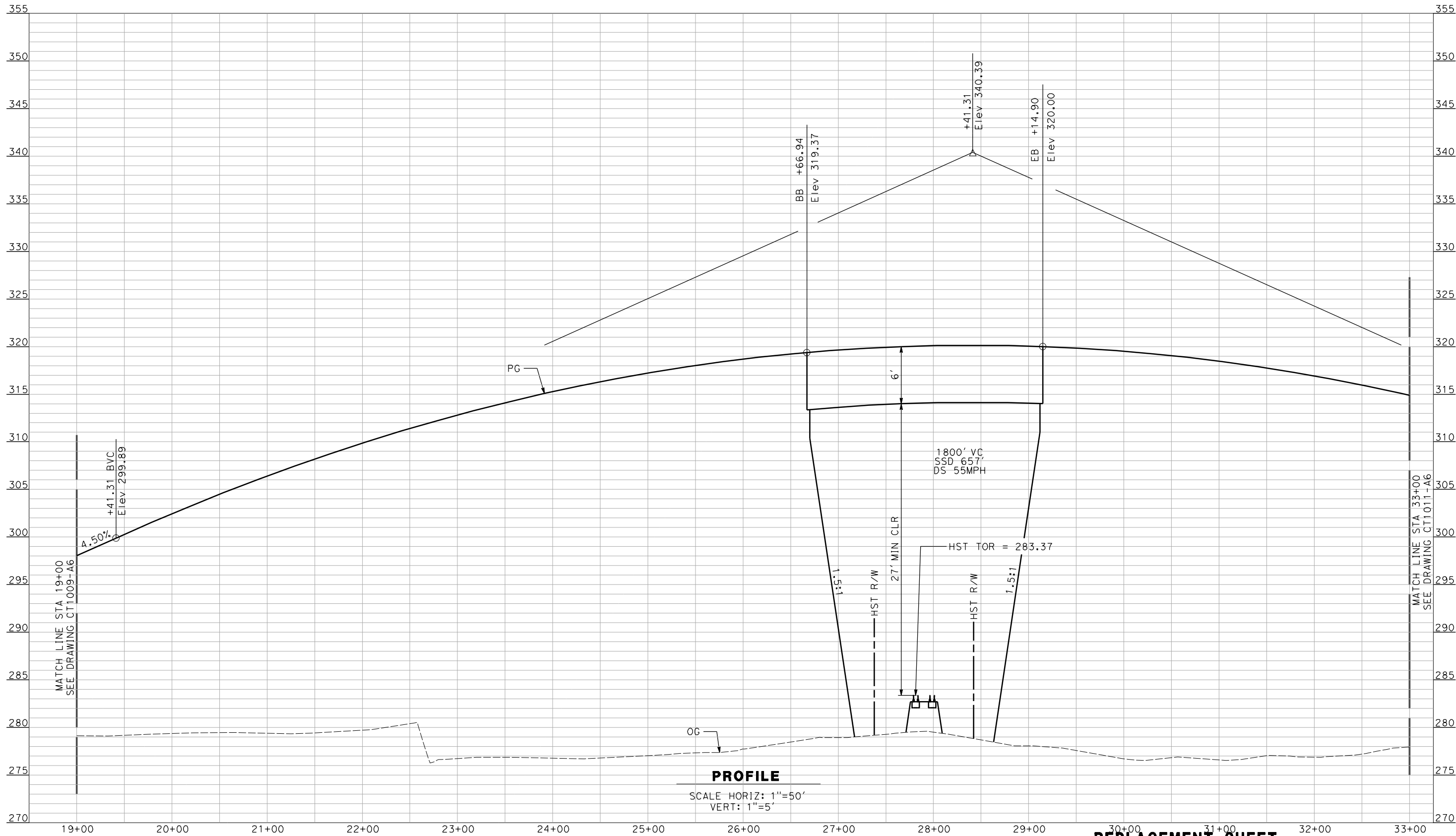
DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
PROFILE  
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1009-A7
SCALE AS SHOWN
SHEET NO. OF ###

12/6/2012 6:30:06 PM \\usscrip001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1010-A6.dgn Huang



**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

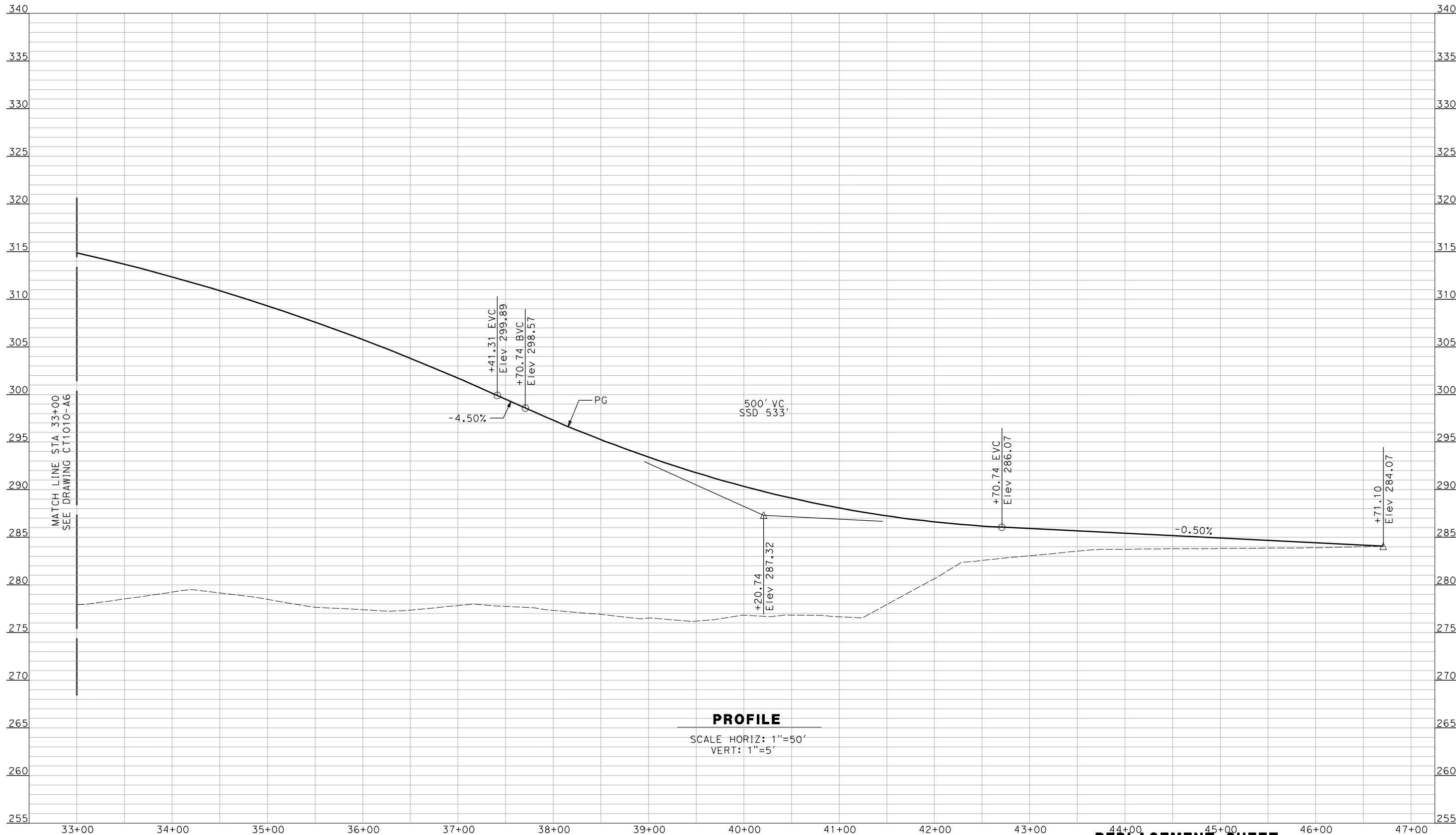
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
PROFILE  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1010-A7  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



12/6/2012 6:30:23 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1011-A6.dgn

Huang



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012



**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 12  
PROFILE  
SHEET 3 OF 3

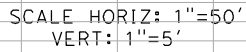
NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

CONTRACT NO.  
HSR06-007

DRAWING NO.  
CT1011-A7

SCALE  
AS SHOWN

SHEET NO.  
OF ###



CONTRACT NO.  
HSR06-007

DRAWING NO.  
CT1012-A

SCALE  
AS SHOWN

SHEET NO.  
### OF ###

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 02/17/2012

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**

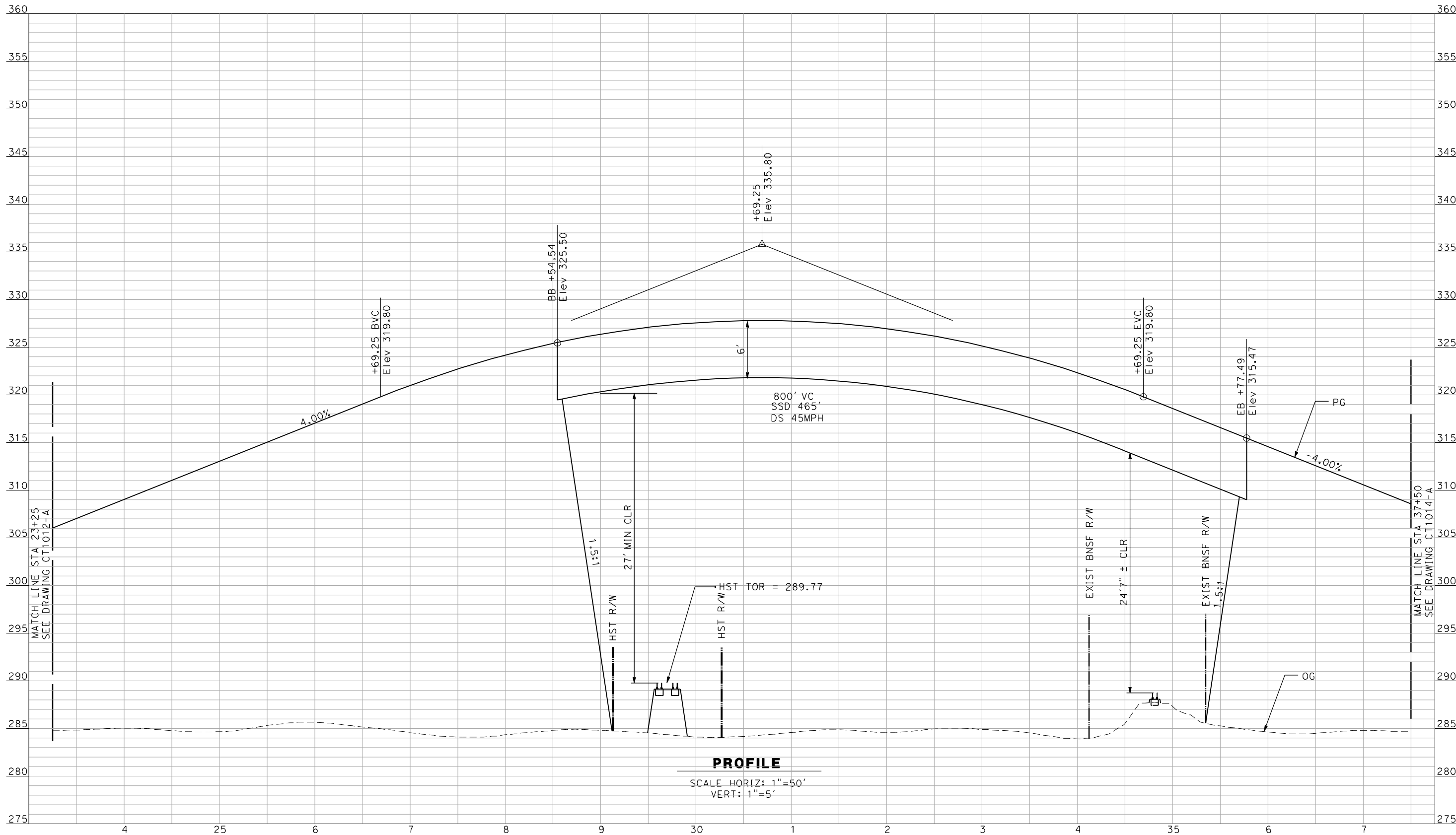


**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY



2/28/2012 2:41:14 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\15% ROADWAY REVISIONS\SHEET UPDATES FOR CRAIG 2-28-12\SHEETS\PROFILE\WF-CT-1013-A\_REV2.dgn

gibsonr\1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



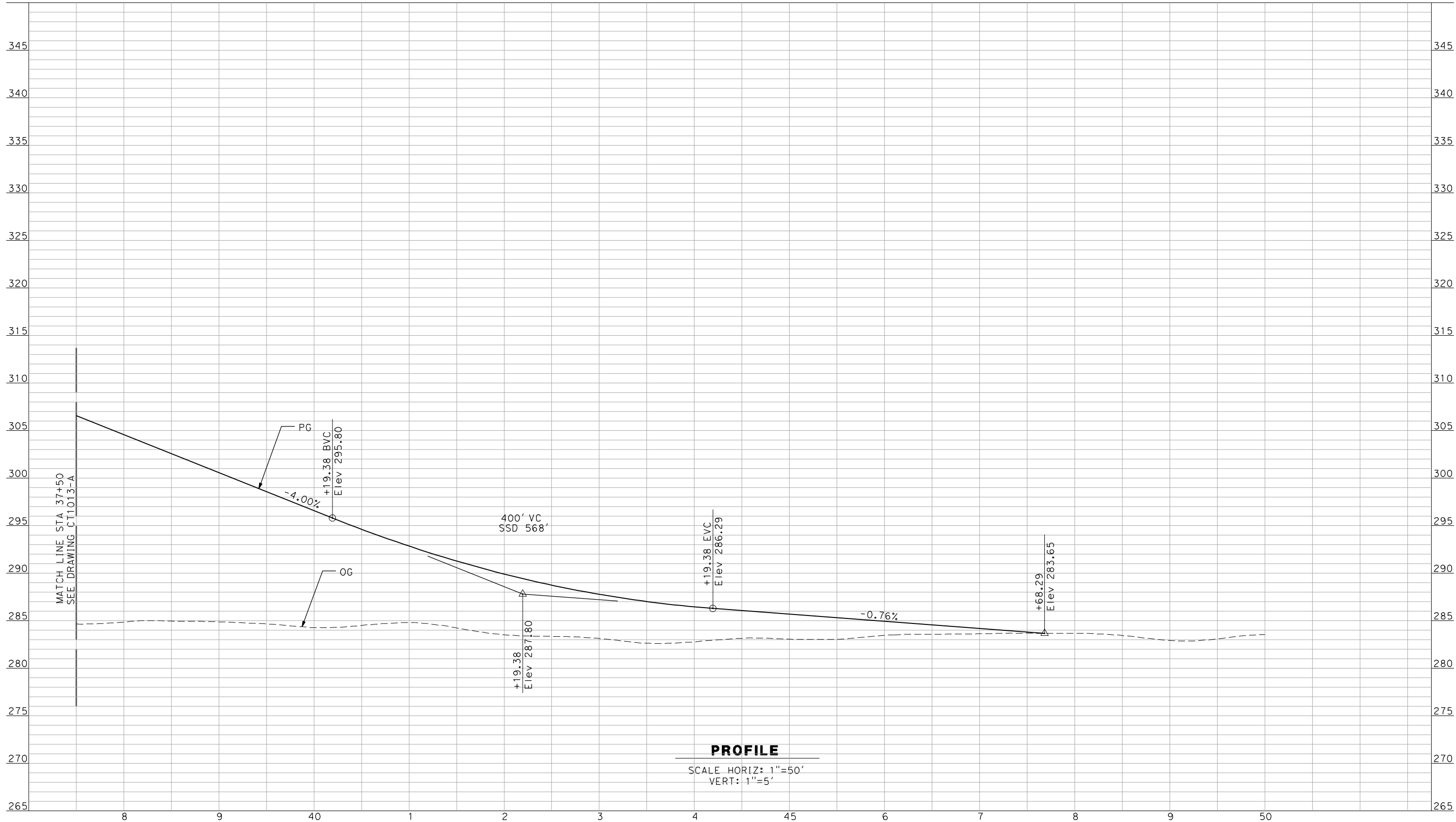
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 13  
PROFILE  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1013-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1\Rev 1 - 15% Plans\CADD\Sheet\PROFILES\1\Rev2\WF-CT-1014-A\_REV2.dgn

GibsonR1

2/16/2012 12:14:20 PM



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

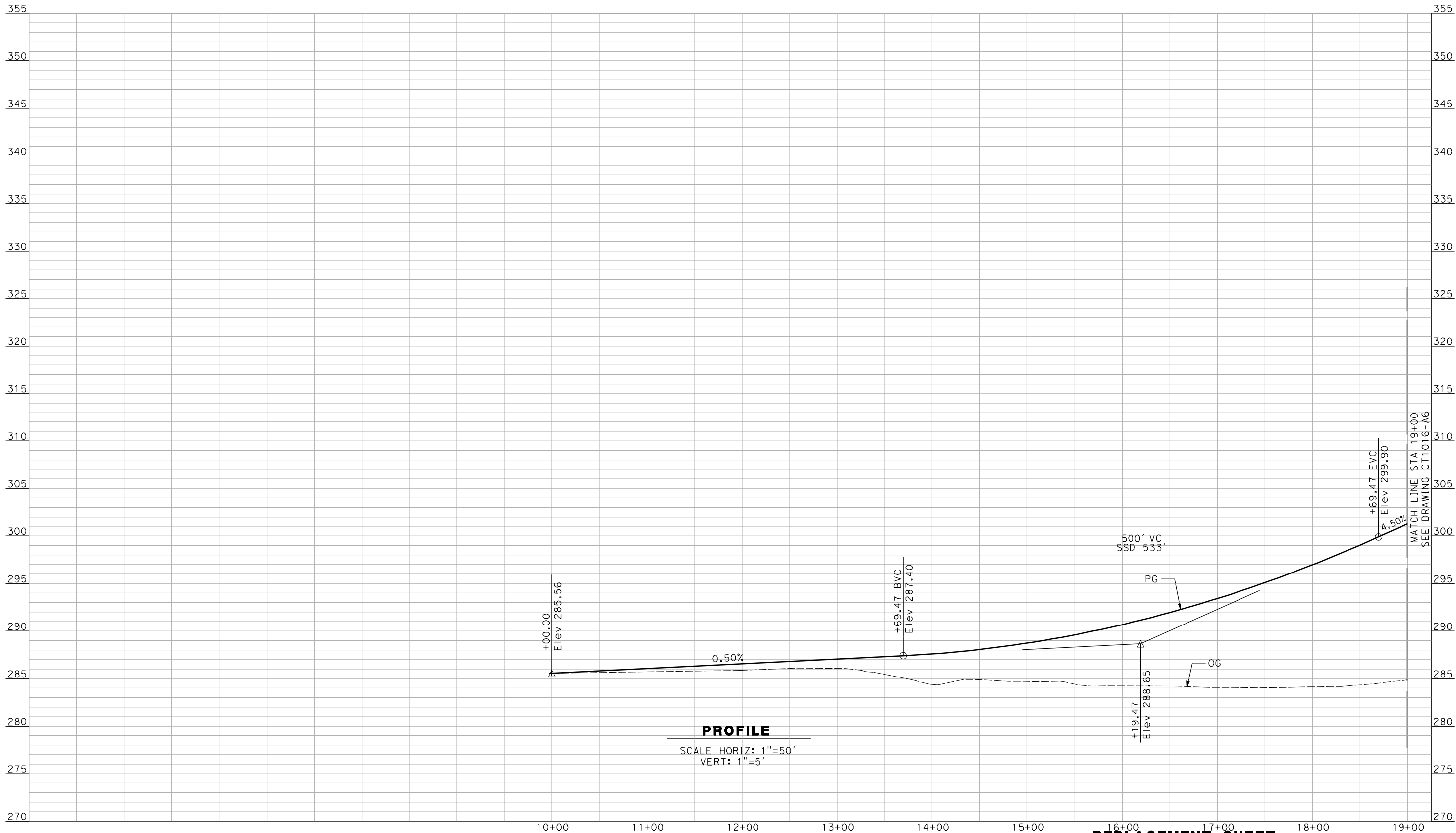
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO

GRADE SEPARATION - AVENUE 13  
PROFILE  
SHEET 3 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1014-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



12/6/2012 6:30:39 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1015-A6.dgn Huang



**REPLACEMENT SHEET**  
**ADDENDUM 7 - RFP HSR 11-16**

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

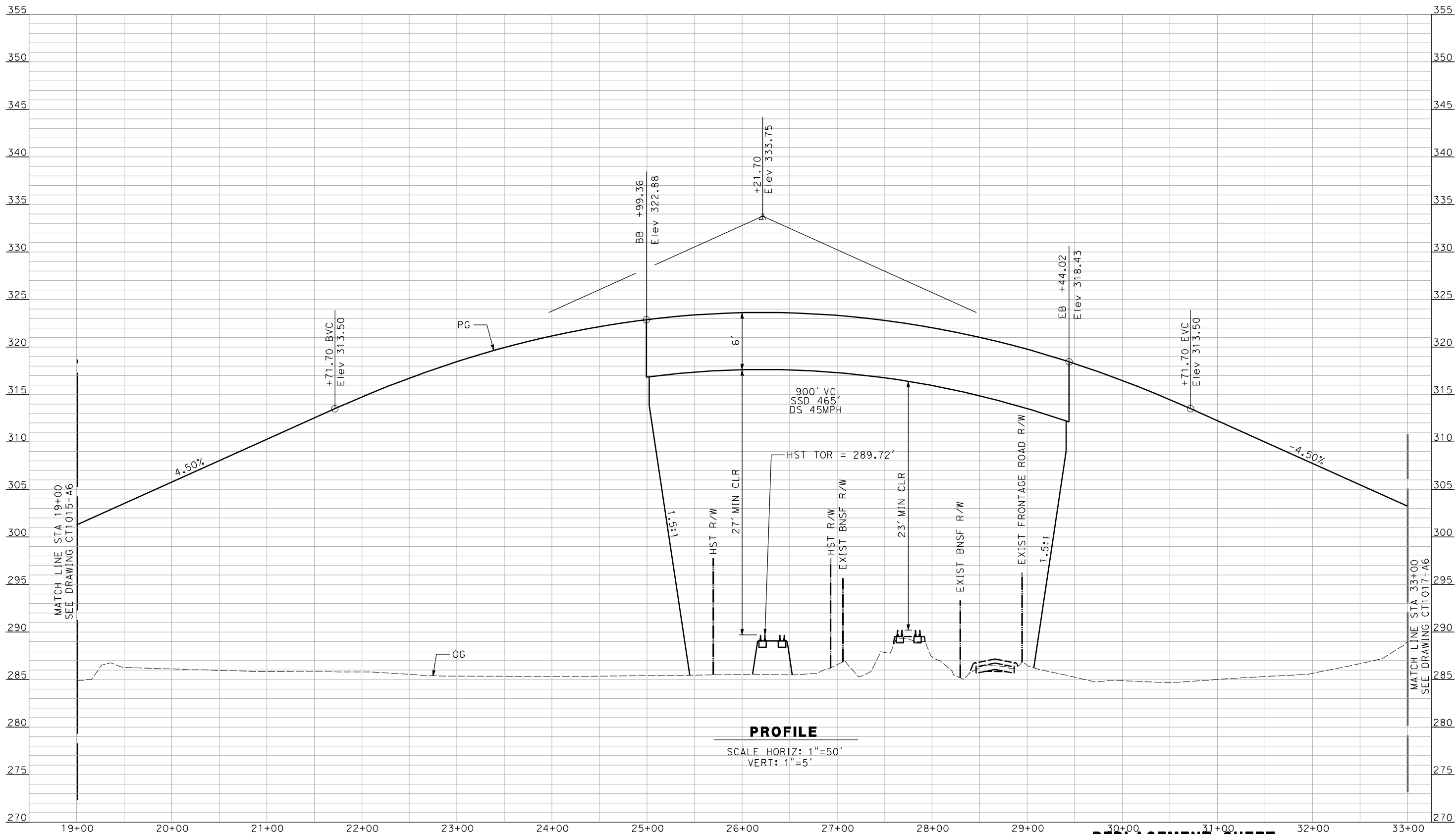


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15  
PROFILE  
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1015-A7
SCALE AS SHOWN
SHEET NO. OF ###

12/6/2012 6:30:54 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500\_Submittals\501.1\_In Progress Draft\_Submittal\501.1\_Deliverable 1\Addendum 7\WF-CT-1016-A6.dgn

Huang



**PROFILE**

SCALE HORIZ: 1"=50'  
VERT: 1"=5'

**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011



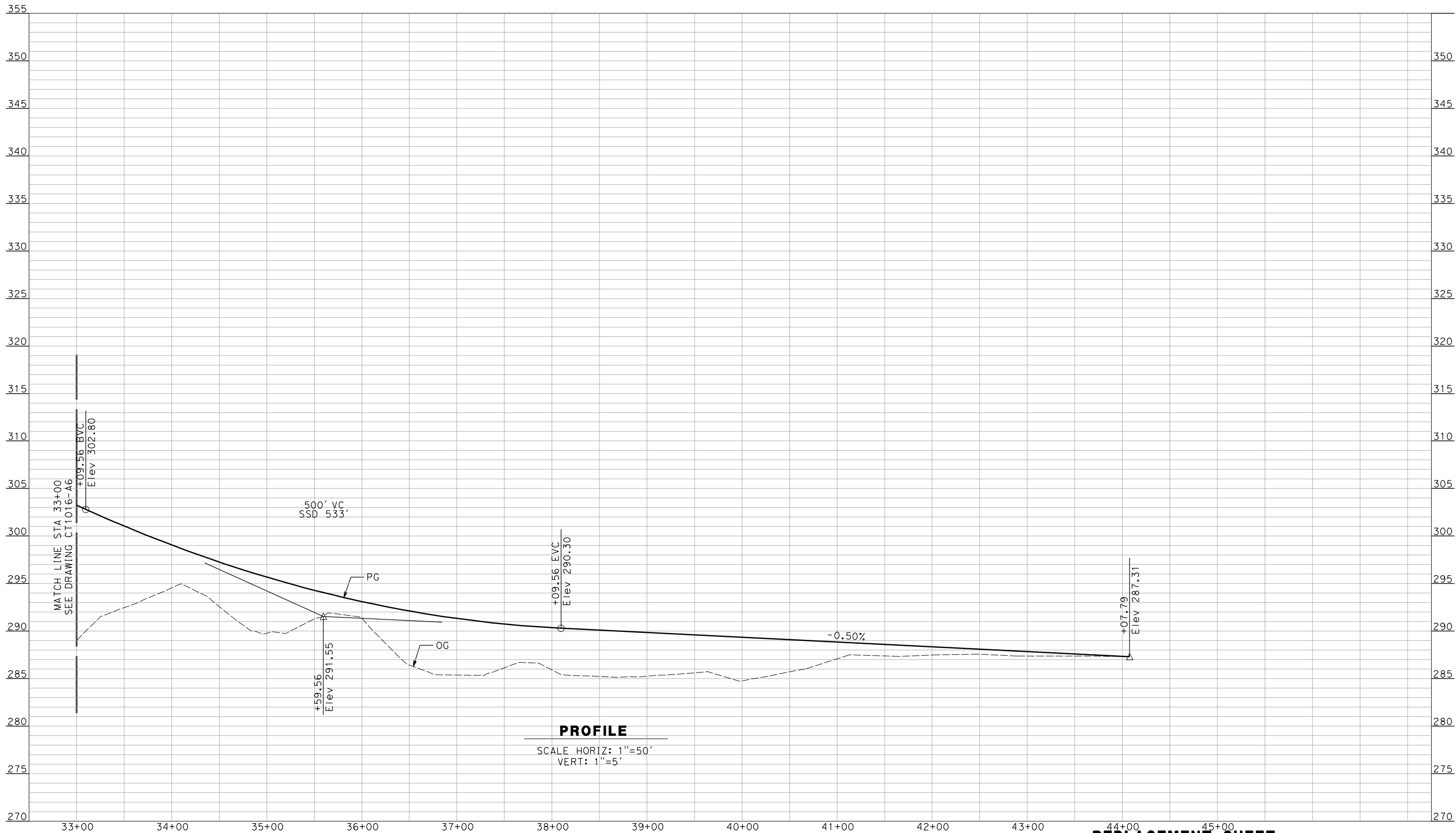
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15  
PROFILE  
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1016-A7
SCALE AS SHOWN
SHEET NO. OF ###

12/17/2012 ADDENDUM 7 - RFP HSR 11-16



12/6/2012 6:45:59 PM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\500 Submittals\501 In Progress Draft Submittal\501.1 Deliverable 1\Addendum 7\WF-CT-1017-A6.dgn



**REPLACEMENT SHEET** NOT FOR CONSTRUCTION  
**ADDENDUM 7 - RFP HSR 11-16** FOR INTERNAL USE ONLY

A	2012-12	AH	RG	RG	REVISED FOR ADDENDUM 7
REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

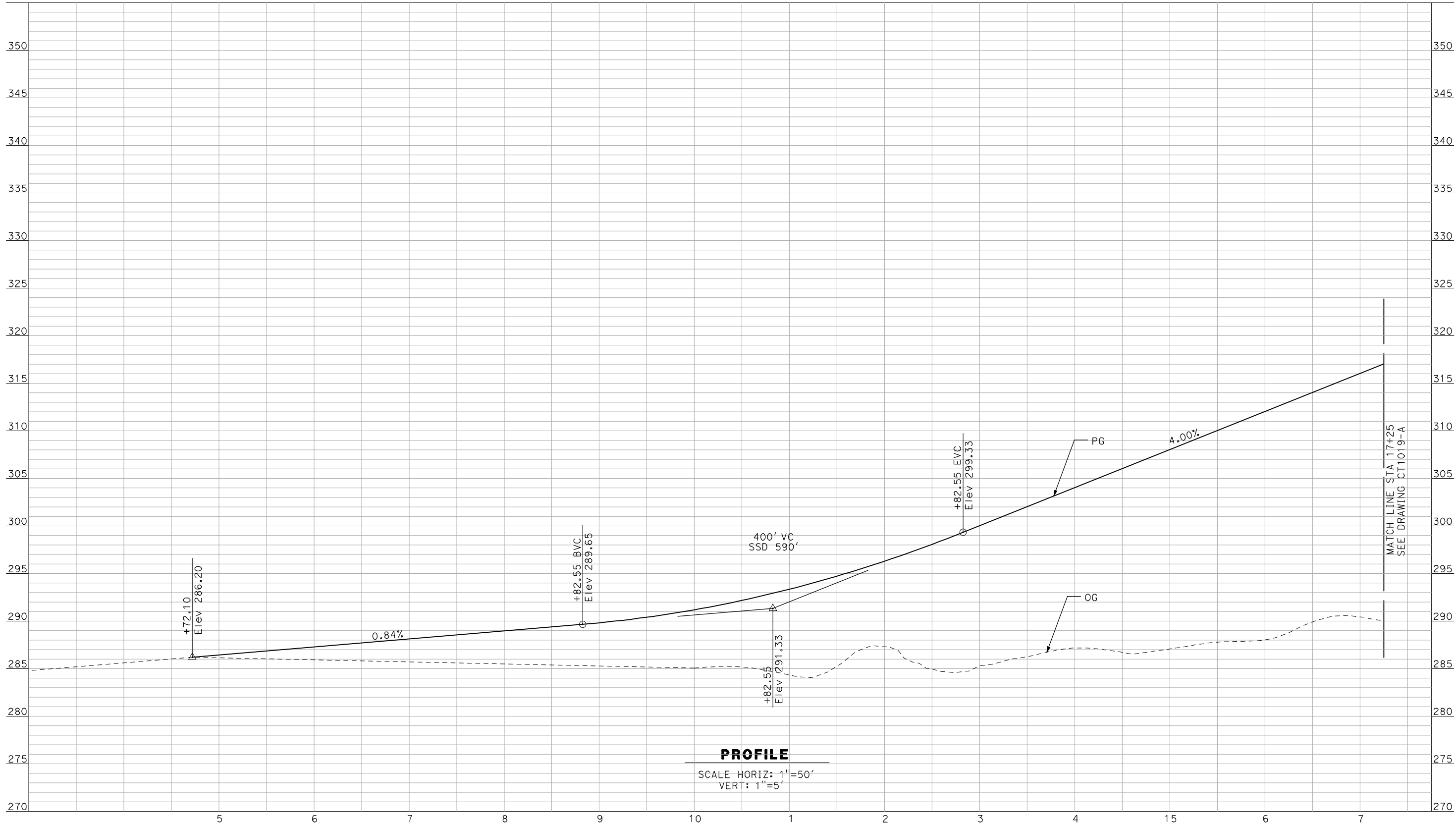


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15  
PROFILE  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1017-A7
SCALE AS SHOWN
SHEET NO. OF ###

5/1/2011 1:43:29 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Profile\WF-CT-1018-A.dgn

GibsonR1



**PROFILE**  
SCALE HORIZ: 1"=50'  
VERT: 1"=5'

NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY J. ZANDIAN
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

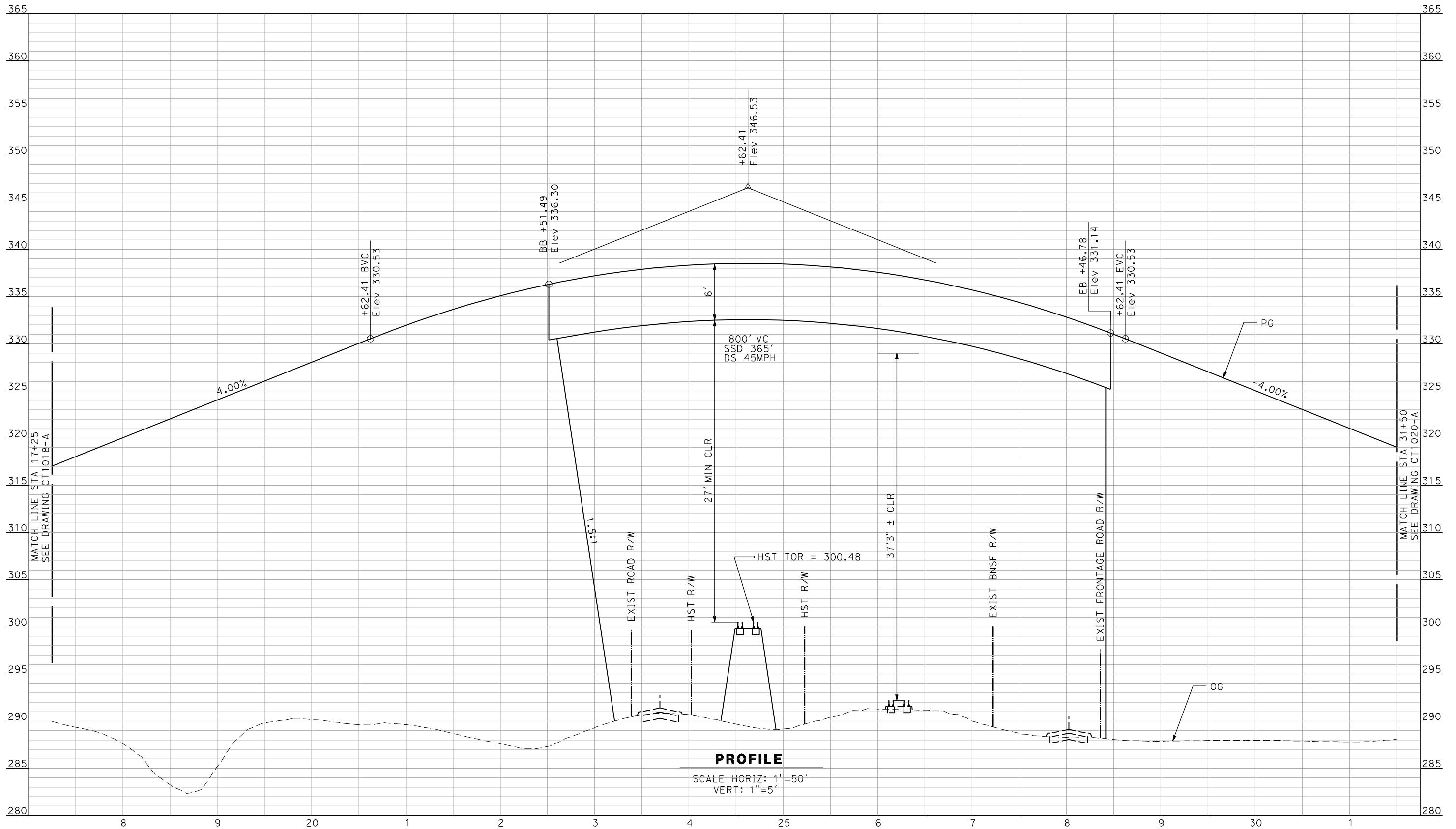
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
PROFILE  
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1018-A
SCALE AS SHOWN
SHEET NO. ### OF ###



2/28/2012 2:42:09 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\15% ROADWAY REVISIONS\SHEET UPDATES FOR CRAIG 2-28-12\SHEETS\PROFILE.MF-CT-1019-A.dgn

gibsonr\1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
06/30/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

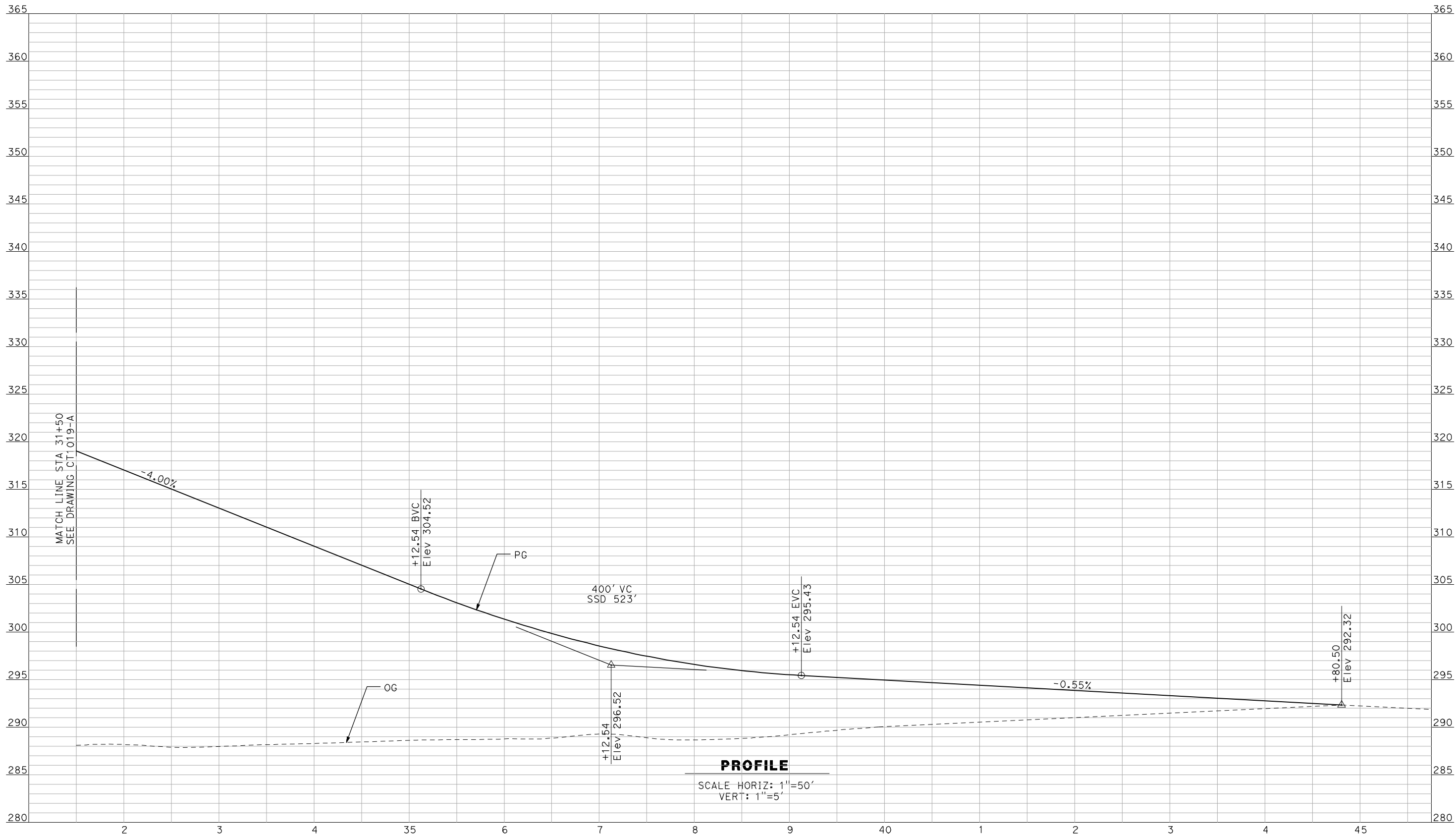
**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
PROFILE  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1019-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###

5/1/2011 1:43:36 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 1 - Hybrid Grade Separation\Profile\WF-CT-1020-A.dgn



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
J. ZANDIAN  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

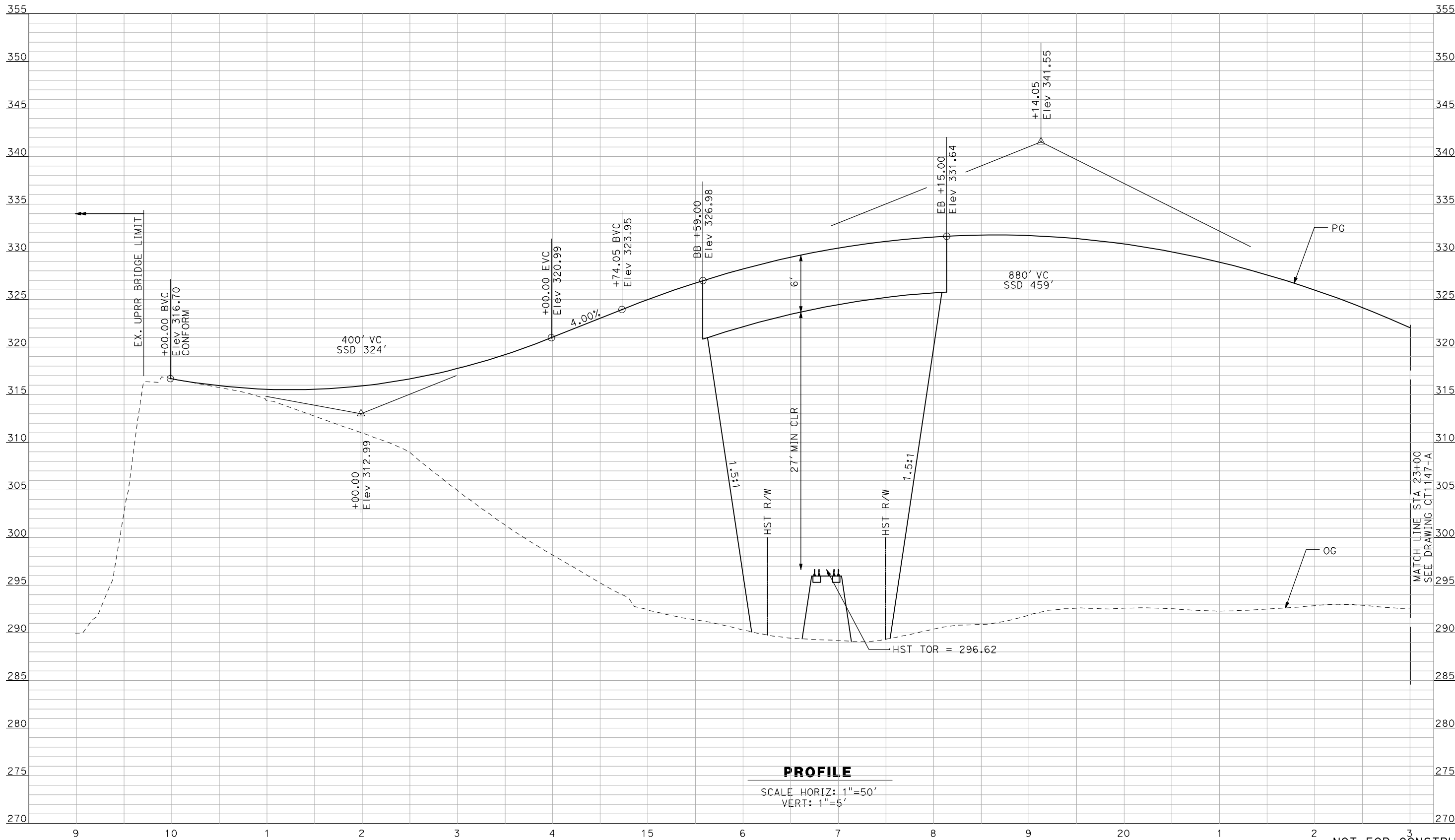
CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE - (HYBRID)  
GRADE SEPARATION - AVENUE 15 1/2  
PROFILE  
SHEET 3 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1020-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



5/1/2011 1:47:39 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-1146-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



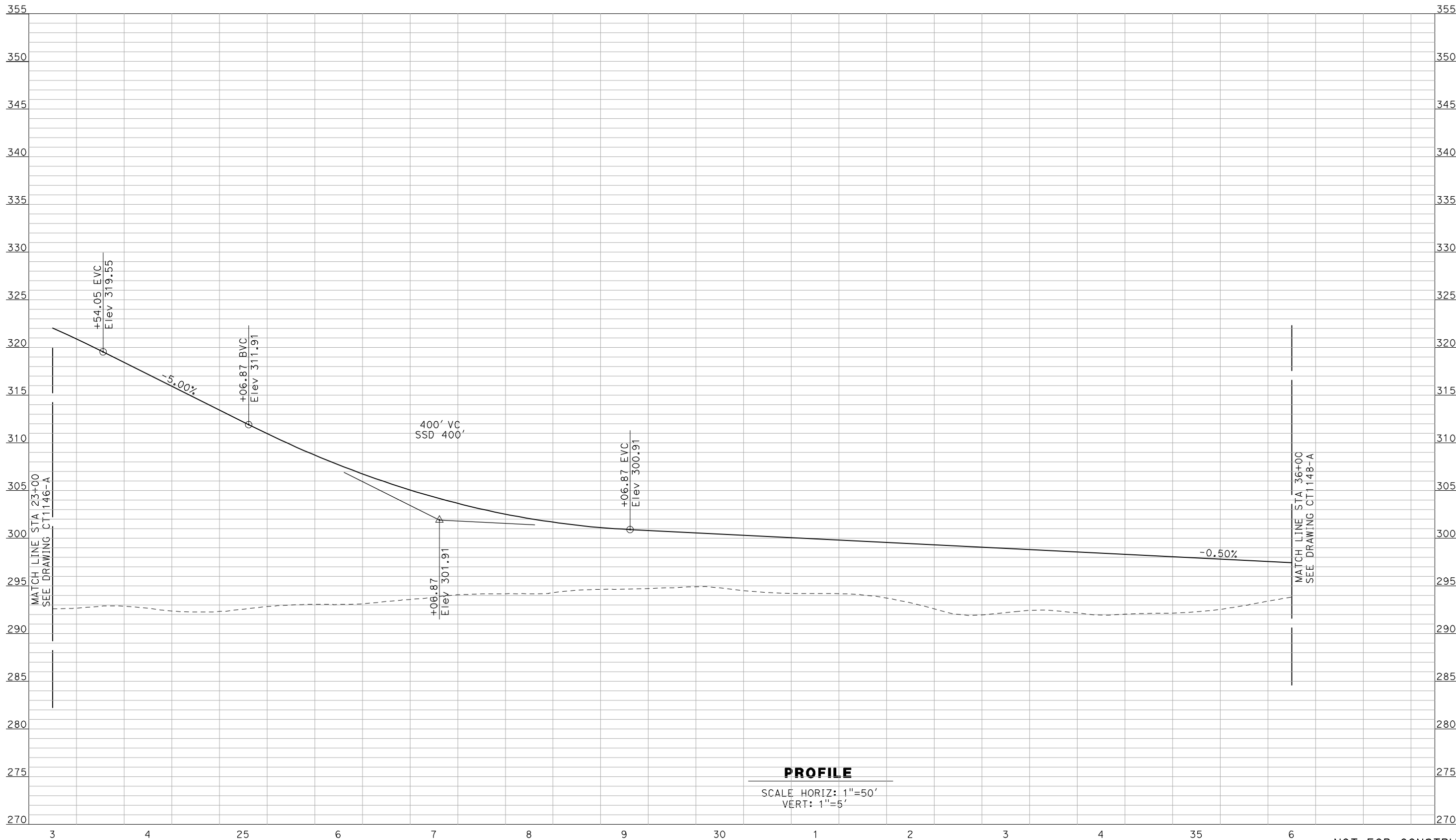
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
PROFILE  
SHEET 1 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT1146-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###

5/1/2011 1:47:43 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-1147-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

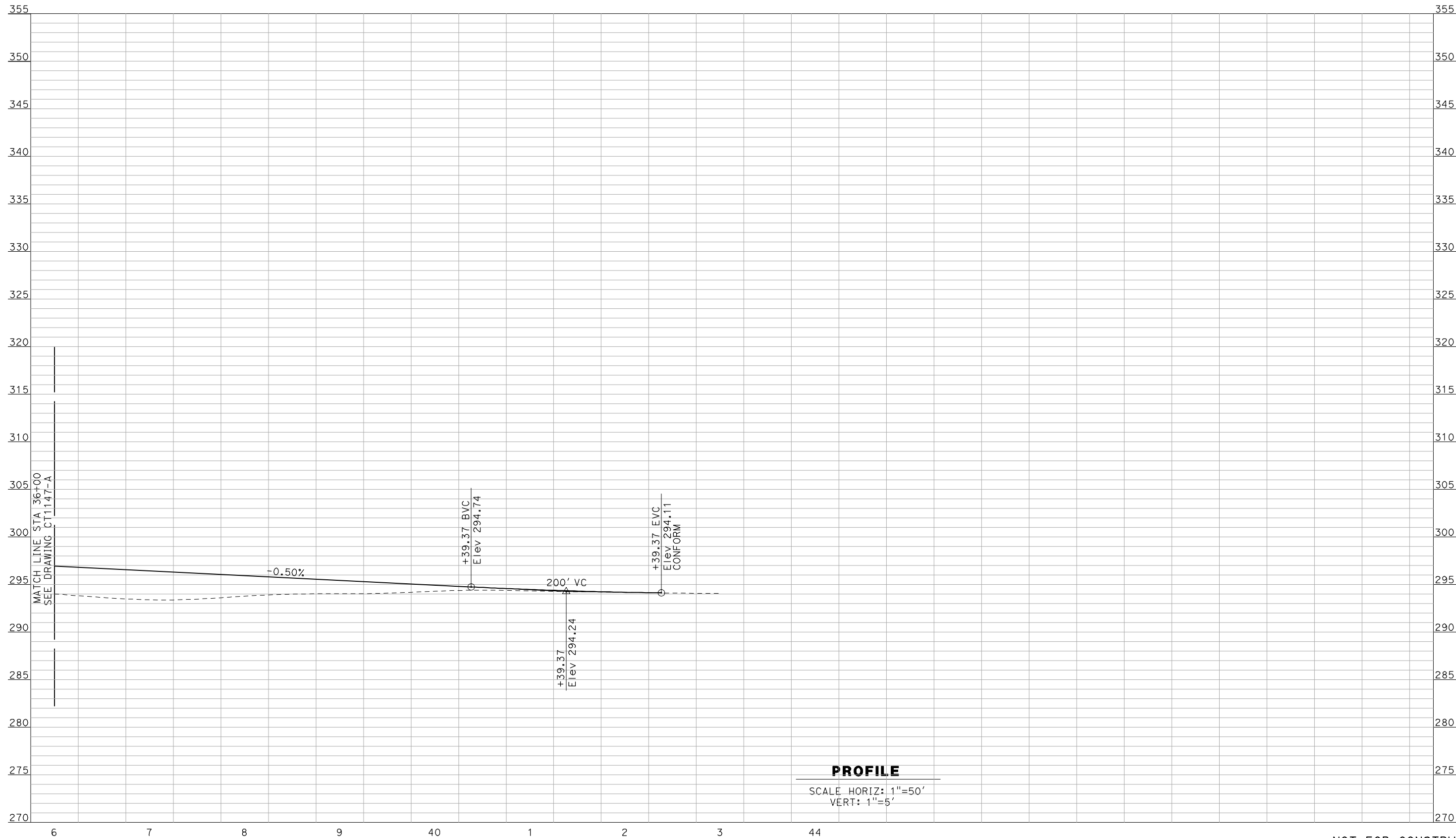
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
PROFILE  
SHEET 2 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1147-A
SCALE AS SHOWN
SHEET NO. OF ###



5/1/2011 1:47:46 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-1148-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 7  
PROFILE  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT1148-A
SCALE AS SHOWN
SHEET NO. OF ###

c:\snerose 2/23/2012 10:17:39 AM \\usscri\fp001\Cadd\ChSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\15%\_Grade Structures\_Revisions\WF-SB-1301.dgn

SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	SHEET TITLE LINE 5	SHEET TITLE LINE 6
ROADWAY BRIDGE STRUCTURE PLAN					
HYBRID ALTERNATIVE/ AVENUE 24					
GENERAL					
	SB1301	HYBRID ALTERNATIVE	AVENUE 24	INDEX OF DRAWINGS	SHEET 1 OF 1
	SB1302	HYBRID ALTERNATIVE	AVENUE 24	STRUCTURE INDEX MAP	SHEET 1 OF 1
OVERHEAD BRIDGES					
	ST1001	BNSF MAIN LINE	AVENUE 21	AVENUE 9 OVERHEAD	PLANNING STUDY
	ST1002	BNSF MAIN LINE	AVENUE 21	AVENUE 10 OVERHEAD	PLANNING STUDY
	ST1003	BNSF MAIN LINE	AVENUE 21	AVENUE 11 OVERHEAD	PLANNING STUDY
	ST1004	BNSF MAIN LINE	AVENUE 21	AVENUE 12 OVERHEAD	PLANNING STUDY
	ST1005	BNSF MAIN LINE	AVENUE 21	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 1 OF 2
	ST1005A	BNSF MAIN LINE	AVENUE 21	AVENUE 13 OVERHEAD	PLANNING STUDY-SHEET 2 OF 2
	ST1006	BNSF MAIN LINE	AVENUE 21	AVENUE 15 OVERHEAD	PLANNING STUDY
	<del>ST1007</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 21</del>	<del>AVENUE 15 1/2 OVERHEAD</del>	<del>PLANNING STUDY</del>
	ST1009	BNSF MAIN LINE	AVENUE 21	AVENUE 17 OVERHEAD	PLANNING STUDY
	<del>ST1010</del>	<del>BNSF MAIN LINE - HYBRID</del>	<del>AVENUE 21</del>	<del>ROAD 27 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1011</del>	<del>BNSF MAIN LINE - HYBRID</del>	<del>AVENUE 21</del>	<del>ROAD 26 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1035</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>AVENUE 20 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1036</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>AVENUE 20 1/2 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1037</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>AVENUE 20 1/2 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1038</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 24 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1039</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 24 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1040</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 22 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1041A</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 20 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1042</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 16 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1043</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 15 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1047</del>	<del>BNSF MAIN LINE</del>	<del>AVENUE 24</del>	<del>ROAD 9 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1160</del>	<del>HYBRID MAIN LINE/WYE CONNECTION</del>	<del>AVENUE 24</del>	<del>ROAD 10 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1121</del>	<del>BNSF MAIN LINE - HYBRID</del>	<del>AVENUE 24</del>	<del>ROAD 13 OVERHEAD</del>	<del>PLANNING STUDY-SHEET 1 OF 2</del>
	<del>ST1161</del>	<del>UPRR/SR 99 MERCED CONNECTION - HYBRID</del>	<del>AVENUE 24</del>	<del>ROAD 13 OVERHEAD</del>	<del>PLANNING STUDY-SHEET 2 OF 2</del>
	<del>ST1133</del>	<del>UPRR/SR 99 MERCED CONNECTION</del>	<del>AVENUE 24</del>	<del>AVENUE 25 OVERHEAD</del>	<del>PLANNING STUDY-SHEET 1 OF 2</del>
	<del>ST1134</del>	<del>UPRR/SR 99 WYE CONNECTION</del>	<del>AVENUE 24</del>	<del>AVENUE 25 OVERHEAD</del>	<del>PLANNING STUDY-SHEET 2 OF 2</del>
	<del>ST1135</del>	<del>UPRR/SR 99 WYE &amp; MERCED CONNECTIONS</del>	<del>AVENUE 24</del>	<del>AVENUE 26 OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1136</del>	<del>UPRR/SR 99 MERCED CONNECTION</del>	<del>AVENUE 24</del>	<del>CROSS ROAD OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1139</del>	<del>UPRR/SR 99 MERCED DO - HYBRID &amp; WYE CONNECTION</del>	<del>AVENUE 24</del>	<del>SANDY MUSH ROAD OVERHEAD</del>	<del>PLANNING STUDY</del>
	<del>ST1180</del>	<del>UPRR/SR 99 MERCED CONNECTION</del>	<del>AVENUE 21</del>	<del>G STREET OVERHEAD</del>	<del>PLANNING STUDY</del>
	ST1070	BNSF MAIN LINE	AVENUE 21	AVENUE 7 OVERHEAD	PLANNING STUDY

"Drawings lined Out are not  
Included for Procurement Purposes Only"

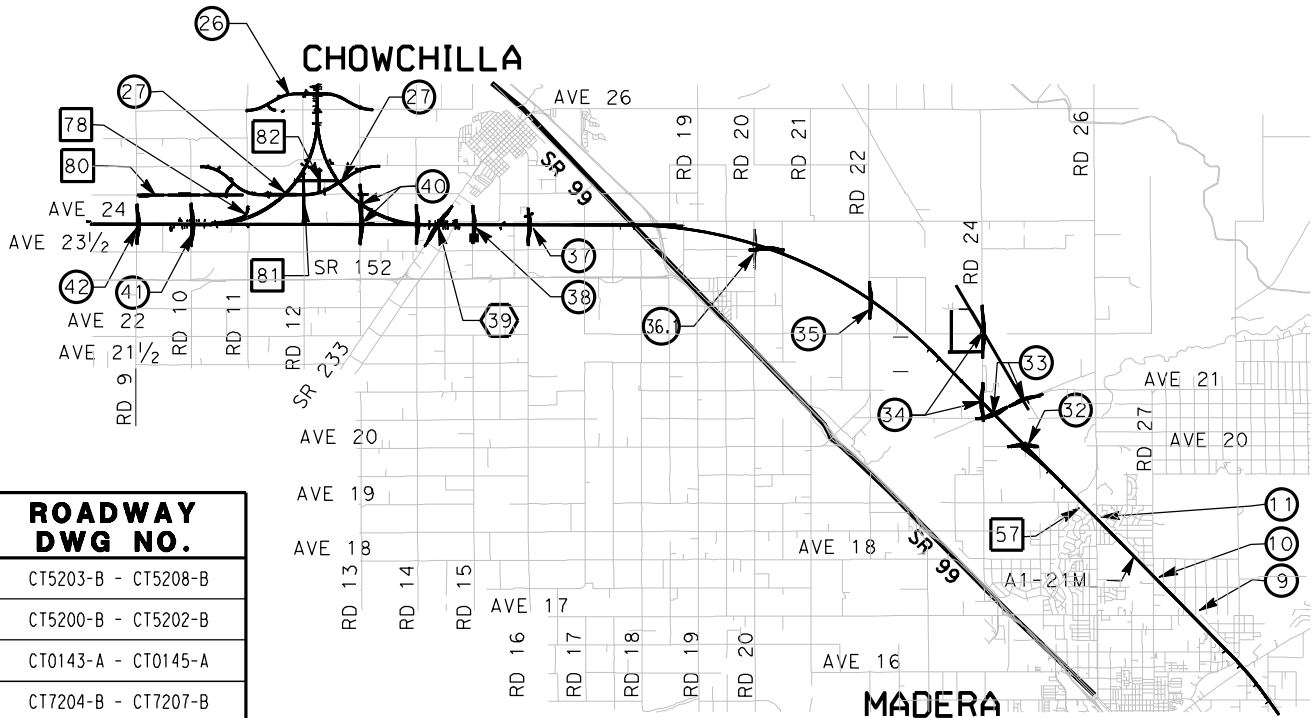
						DESIGNED BY H. Lee	RECORD SET 15% DESIGN SUBMITTAL  NOT FOR CONSTRUCTION	<div><div><div>AECOM</div><div>Technical Services, Inc.</div><div>2020 L Street, Suite 300</div><div>Sacramento, CA 95811</div></div><div><div>CH2MHILL</div></div></div>	<div><div><div><div></div></div><div>CALIFORNIA</div><div>HIGH-SPEED RAIL AUTHORITY</div></div></div>	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO HYBRID ALTERNATIVE AVENUE 24 INDEX OF DRAWINGS SHEET 1 OF 1	CONTRACT NO. HSR06-007
						DRAWN BY E. CISNEROS					DRAWING NO. SB1301
						CHECKED BY J. RENTERIA					SCALE No scale
						IN CHARGE A. Boone					SHEET NO. OF
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011					



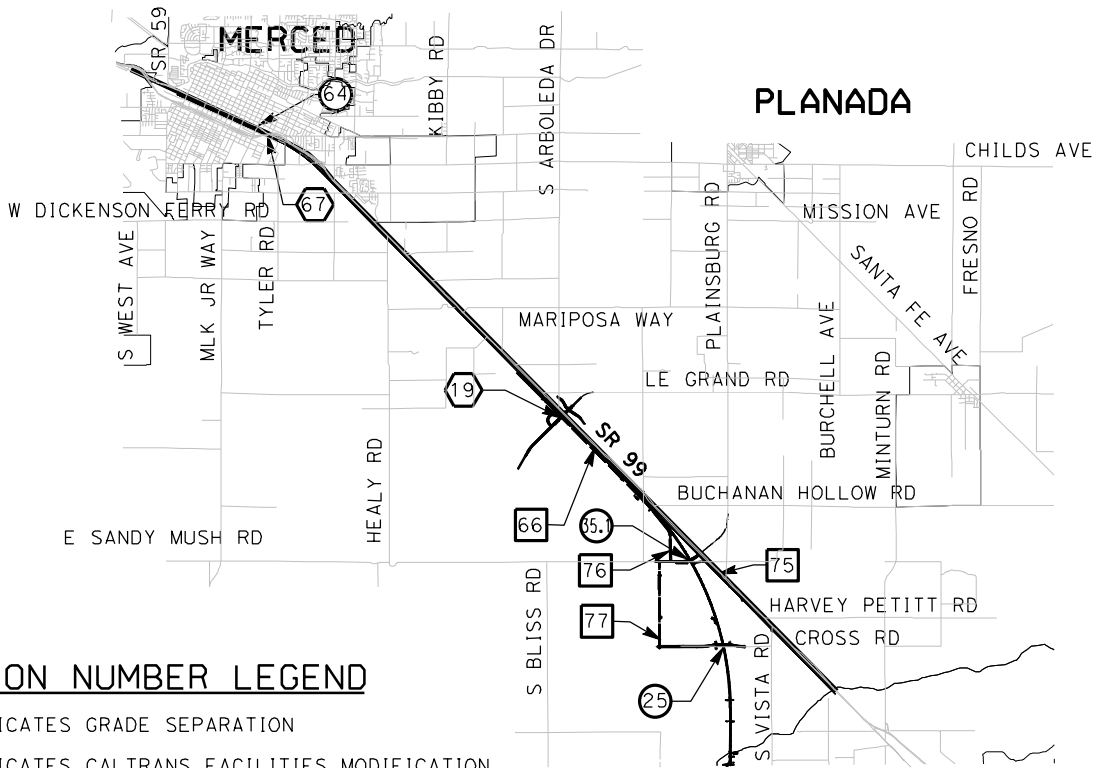
c:\user1\p001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\15%\_Grade Structures\_Revisions\SB1302.dgn 2/16/2012 2:12:34 PM

LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
1	AVENUE 9 OVERHEAD	ST1001	CT0001-A - CT0003-A
2	AVENUE 10 OVERHEAD	ST1002	CT0004-A - CT0006-A
3	AVENUE 11 OVERHEAD	ST1003	CT0007-A - CT0009-A
4	AVENUE 12 OVERHEAD	ST1004	CT0010-A - CT0012-A
5	AVENUE 13 OVERHEAD	ST1005	CT0013-A - CT0016-A
6	AVENUE 15 OVERHEAD	ST1006	CT0017-A - CT0019-A
7	AVENUE 15½ OVERHEAD	ST1007	CT0020-A - CT0022-A
9	AVENUE 17 OVERHEAD	ST1009	CT0026-A - CT0028-A
10	ROAD 27 OVERHEAD	ST1010	CT0029-A - CT0031-A
11	ROAD 26 OVERHEAD	ST1011	CT0032-A - CT0034-A
25	CROSS ROAD OVERHEAD	ST1136	CT5238-B - CT5240-B
26	AVENUE 26 OVERHEAD	ST1135	CT5227-B - CT5236-B
27	AVENUE 25 OVERHEAD	ST1133 & ST1134	CT5209-B - CT5225-B
32	AVENUE 20 OVERHEAD	ST1035	CT0113-A - CT0115-A
33	AVENUE 20½ OVERHEAD	ST1036 & ST1037	CT0116-A - CT0118-A
34	ROAD 24 OVERHEAD	ST1038 & ST1039	CT0119-A - CT0121-A
35	ROAD 22 OVERHEAD	ST1040	CT0122-A - CT0124-A
66	ROAD 20 OVERHEAD	ST1041A	CT0125-A - CT0127-A
37	ROAD 16 OVERHEAD	ST1042	CT0128-A - CT0130-A
38	ROAD 15 OVERHEAD	ST1043	CT0131-A - CT0133-A

LOCATION NO.	SHEET TITLE	STRUCTURE DWG NO.	ROADWAY DWG NO.
40	ROAD 13 OVERHEAD	ST1121 & ST1161	CT5203-B - CT5208-B
41	ROAD 10 OVERHEAD	ST1160	CT5200-B - CT5202-B
42	ROAD 9 OVERHEAD	ST1047	CT0143-A - CT0145-A
35.1	SANDY MUSH ROAD OVERHEAD	ST1139	CT7204-B - CT7207-B
64	G STREET OVERHEAD	ST1180	CT0149-A
65	AVENUE 7 OVERHEAD	ST1070	



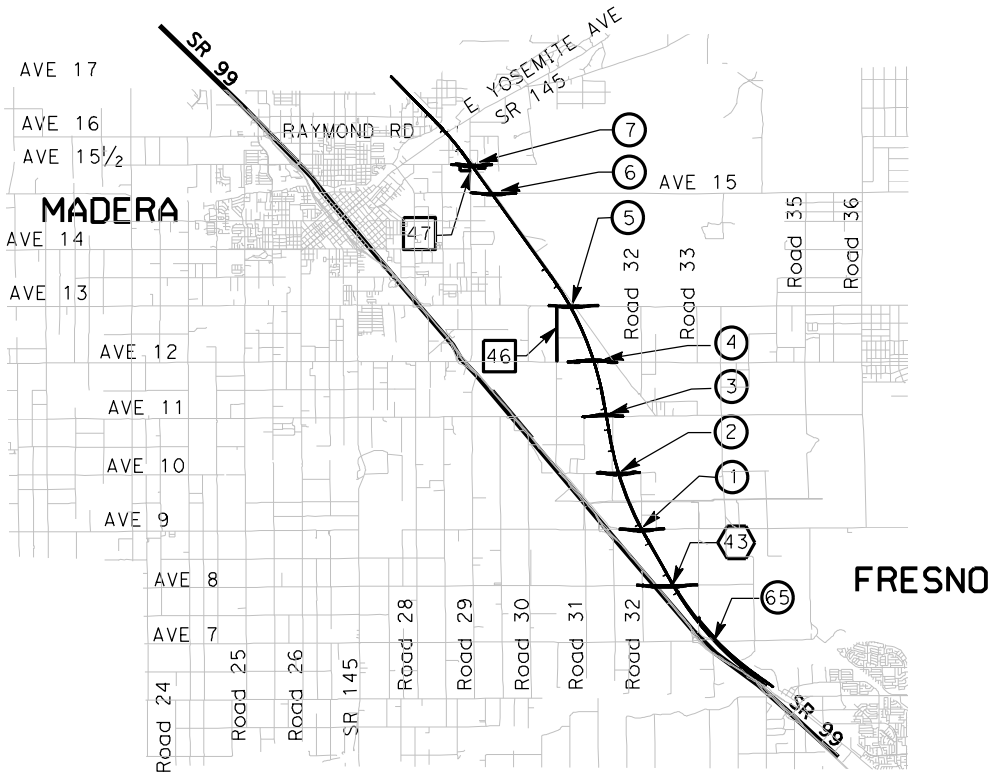
VICINITY MAP 2



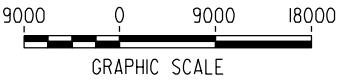
VICINITY MAP 1

LOCATION NUMBER LEGEND

- (X) - INDICATES GRADE SEPARATION
- (X) - INDICATES CALTRANS FACILITIES MODIFICATION
- (X) - INDICATES LOCAL ROAD RELOCATION



VICINITY MAP 3



REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. Lee
DRAWN BY E. CISNEROS
CHECKED BY J. ZANDIAN
IN CHARGE A. Boone
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

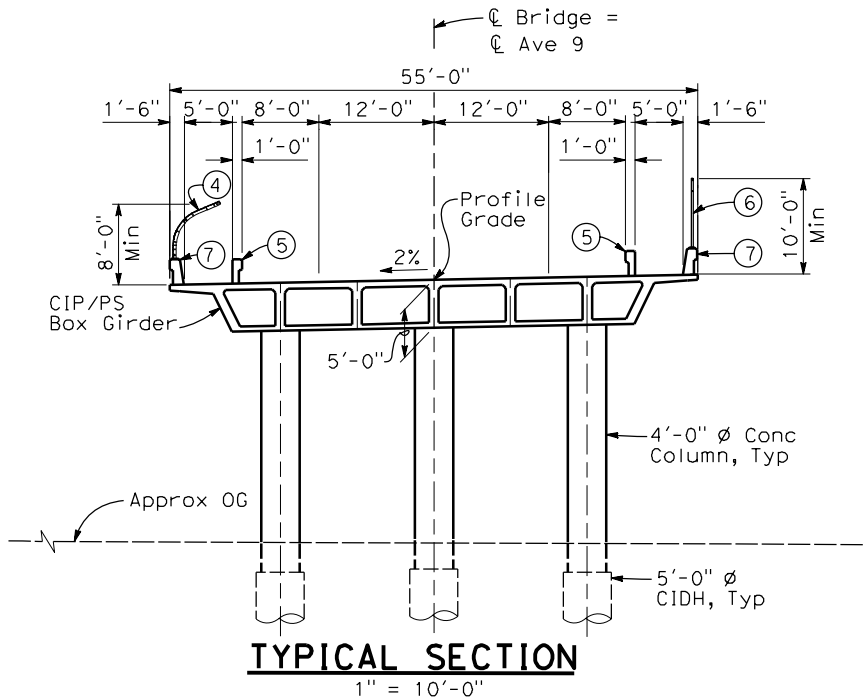
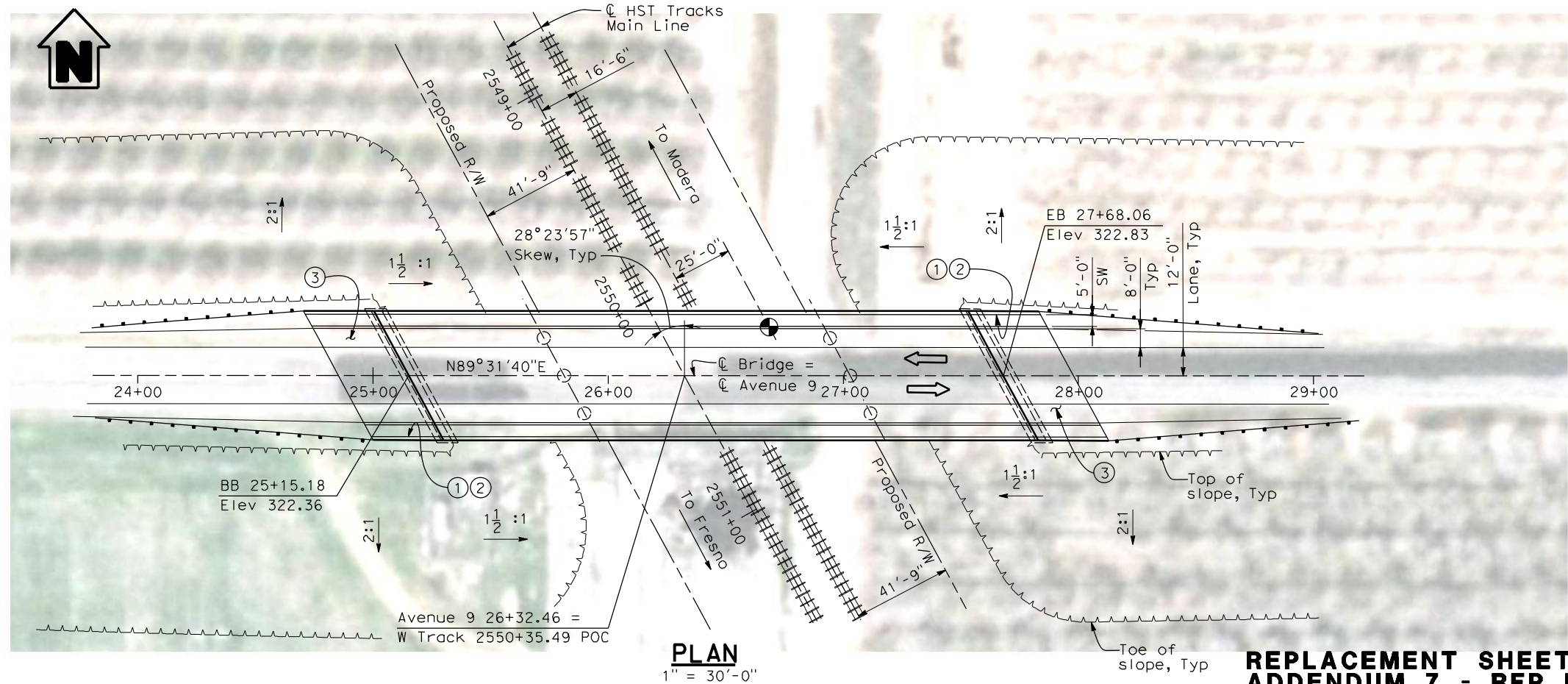
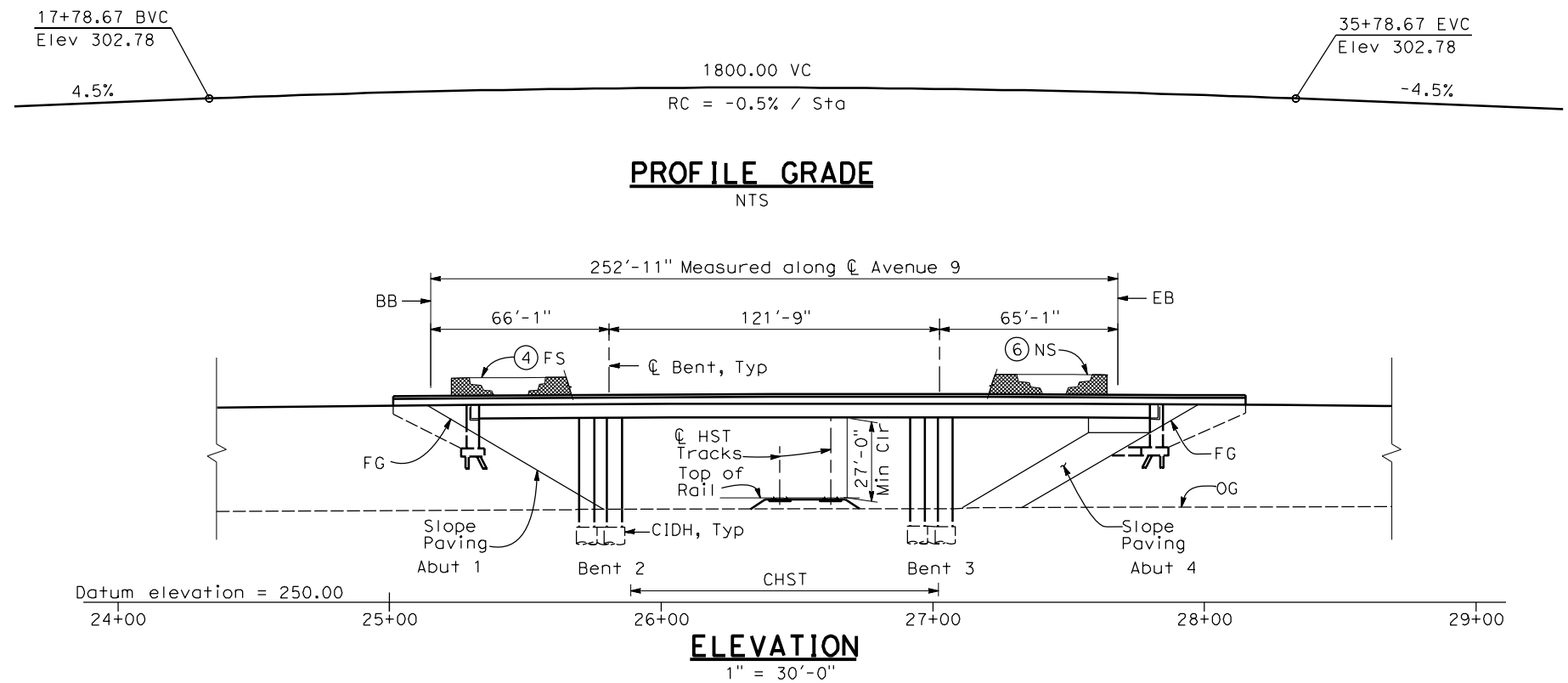


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID ALTERNATIVE  
AVENUE 24  
STRUCTURE INDEX MAP  
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. SB1302
SCALE As shown
SHEET NO. OF

c:\user\c1\p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\cadd\Struct\Sheet\Addendum\ADD7-W-ML-ST-1001-A7.dgn 12/4/2012 2:19:47 PM



- NOTES:**
1. Paint "Bridge No. XX-XX"
  2. Paint "Avenue 9 OH"
  3. Structure Approach Slab Type N (30S)
  4. Chain Link Railing Type 3
  5. Concrete Barrier Type 26 (Mod)
  6. Chain Link Railing Type 7 (Mod)
  7. Concrete Barrier Type 732
  8. Bearing of Avenue 9 to be determined.
  9. Existing underground and overhead utilities to be determined.

- LEGEND:**
- ← Direction of traffic
  - Point of minimum vertical clearance

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 5'-0"
LENGTH	= 252'-11"
WIDTH	= 55'-0"
AREA	= 13,910 ft <sup>2</sup>
COST/ CFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

**REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16**

**LOCATION 1**

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	EC	HL	HL	REVISED FOR ADDENDUM 7

DESIGNED BY  
H. LEE  
DRAWN BY  
E. CISNEROS  
CHECKED BY  
J. RENTERIA  
IN CHARGE  
A. BOONE  
DATE  
01/13/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**

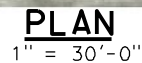
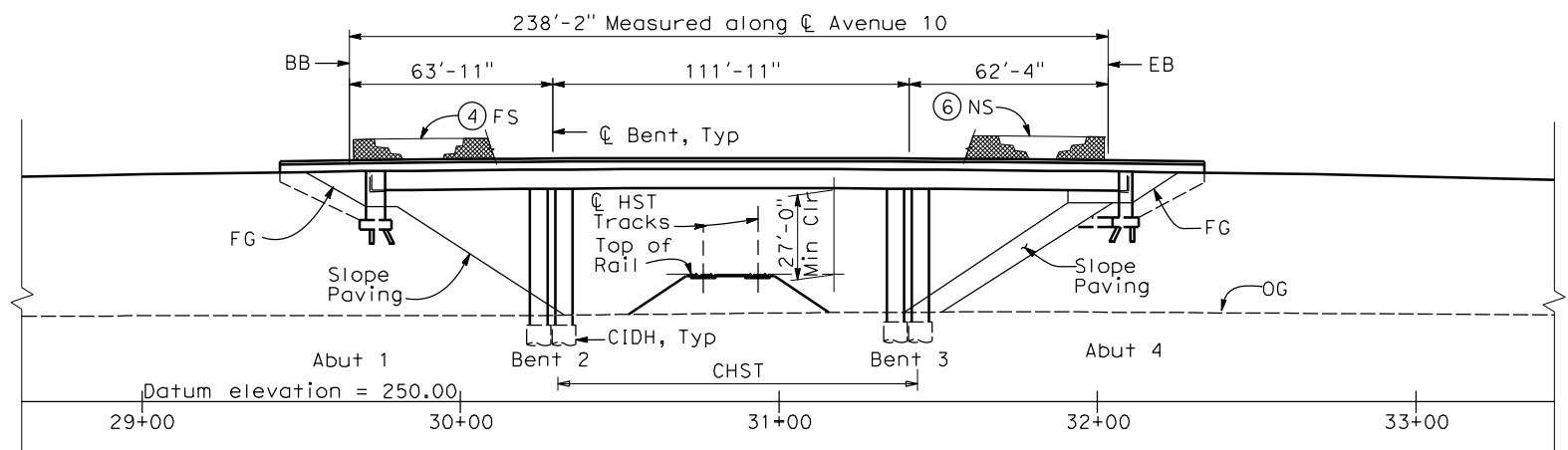


**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 9 OVERHEAD  
PLANNING STUDY**

CONTRACT NO. HSR06-007
DRAWING NO. ST1001-A7
SCALE As shown
SHEET NO. OF

12/17/2012 ADDENDUM 7 - RFP HSR 11-16





- ### NOTES:
- ① Paint "Bridge No. XX-XX"
  - ② Paint "Avenue 10 OH"
  - ③ Structure Approach Slab Type N (30S)
  - ④ Chain Link Railing Type 3
  - ⑤ Concrete Barrier Type 26 (Mod)
  - ⑥ Chain Link Railing Type 7 (Mod)
  - ⑦ Concrete Barrier Type 732
  - 8 Bearing of Avenue 10 to be determined.
  - 9 Existing underground and overhead utilities to be determined.

- LEGEND:**
- ← Direction of traffic
- ⊙ Point of minimum vertical clearance

DATE OF ESTIMATE	=	_____
BRIDGE REMOVAL	=	_____
STRUCTURE DEPTH	=	5'-0"
LENGTH	=	238'-2"
WIDTH	=	47'-6"
AREA	=	11,312 f+ <sup>2</sup>
COST/□ FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	_____
TOTAL COST	=	_____




						DESIGNED BY H. LEE
						DRAWN BY E. CISNEROS
						CHECKED BY J. RENTERIA
						IN CHARGE A. BOONE
1	01/13/12	HL	JR	AB		DATE 01/13/2012
REV	DATE	BY	CHK	APP	DESCRIPTION	

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**

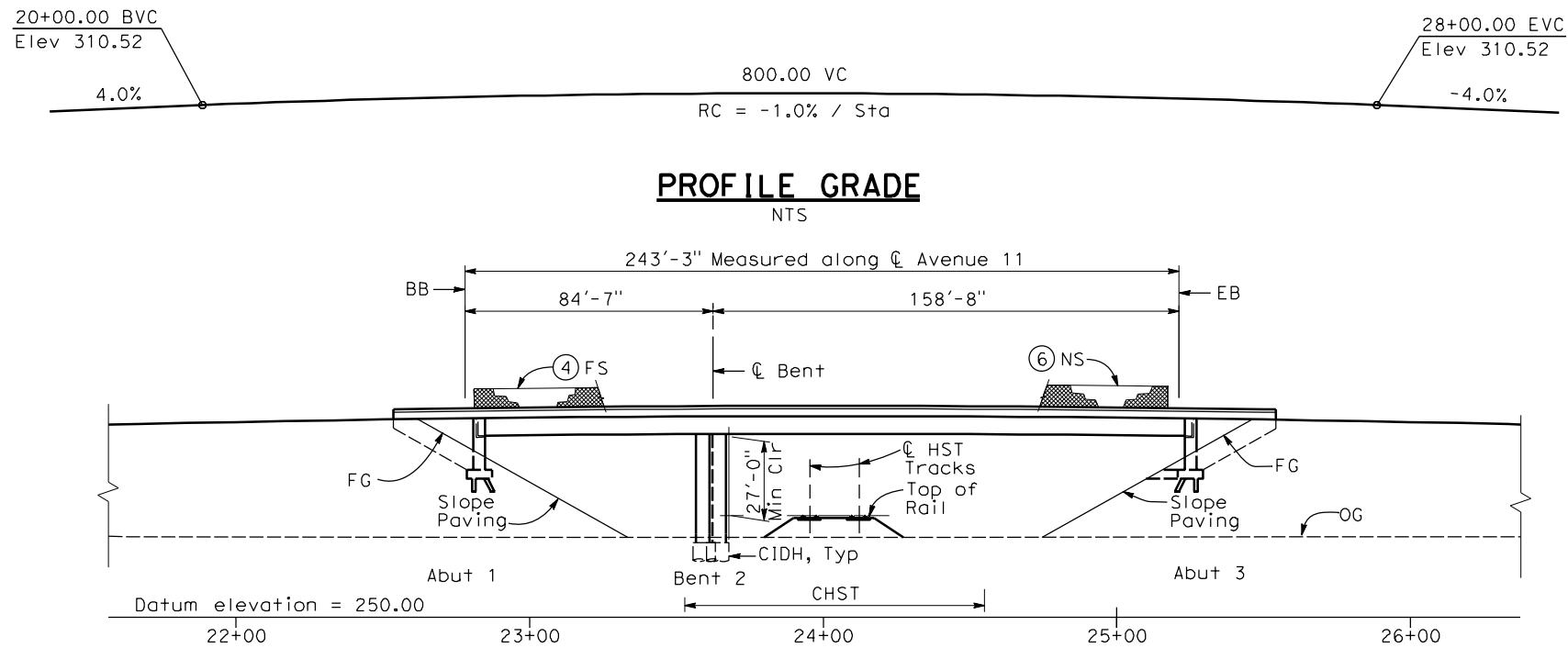


**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

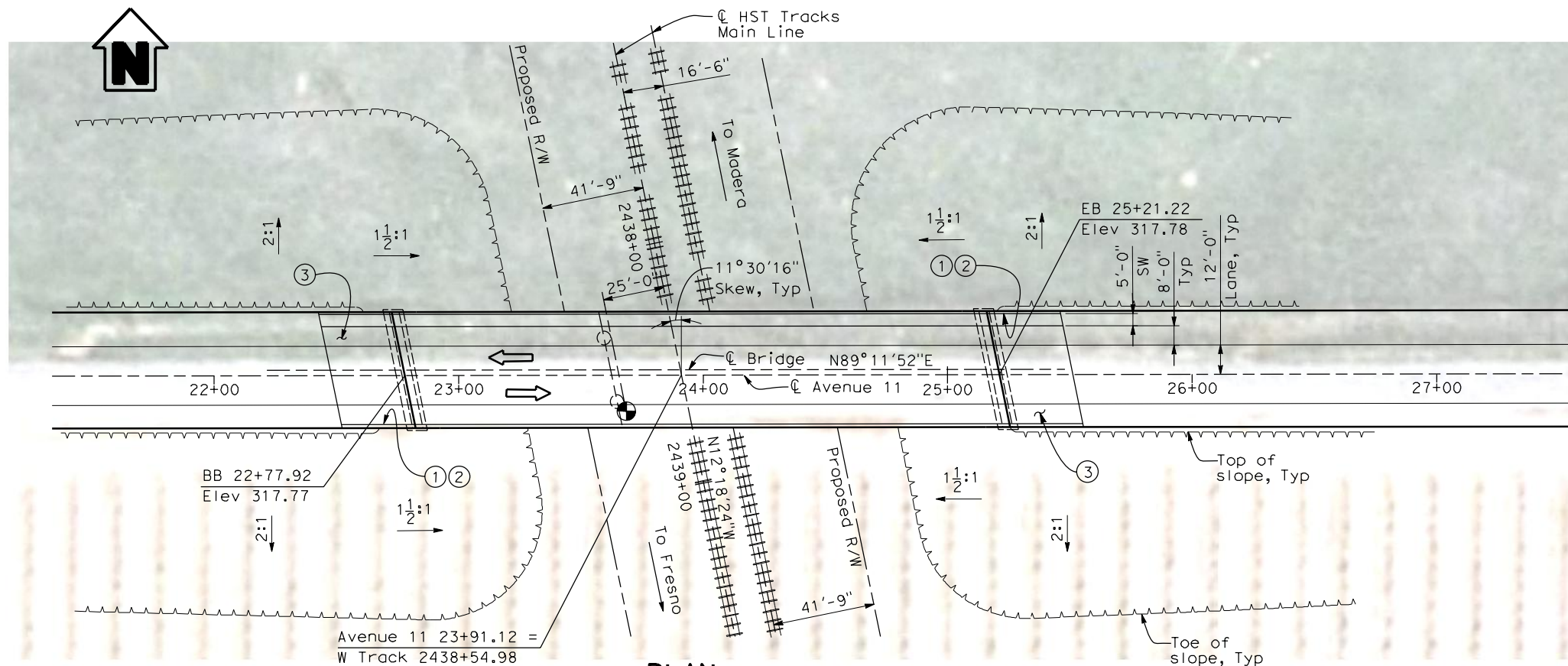
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 10 OVERHEAD  
PLANNING STUDY

CONTRACT NO.	HSR06-007
DRAWING NO.	ST1002
SCALE	As shown
SHEET NO.	OF

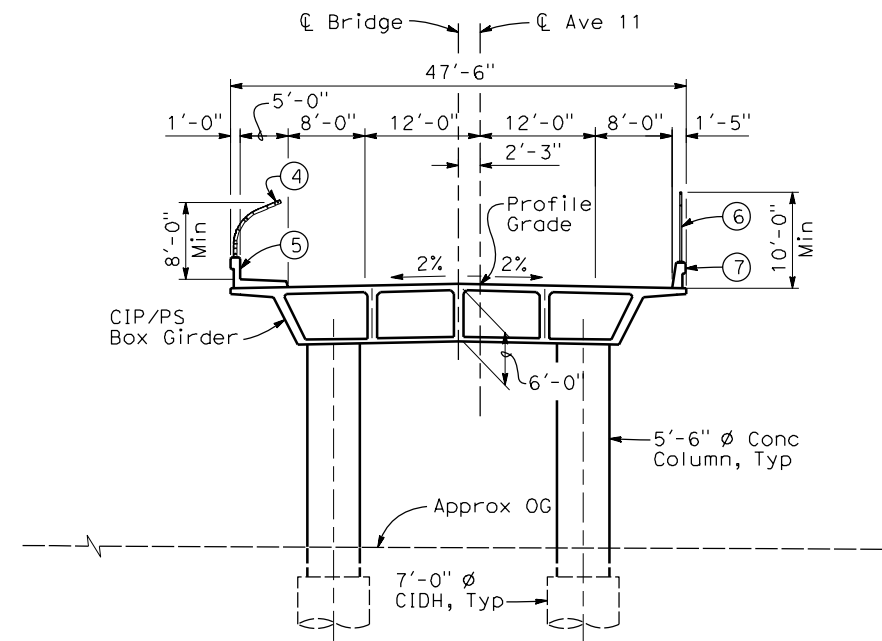
c:\p001\p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\cadd\Struct\Addendum A7\W-ML-ST-1003-A7.dgn 12/4/2012 2:23:43 PM \usscri1p001\cadd\chsr\60022962\Task-03\_Merced-Fresno\cadd\Struct\Addendum A7\W-ML-ST-1003-A7.dgn



**ELEVATION**  
1" = 30'-0"



**PLAN**  
1" = 30'-0"



**TYPICAL SECTION**  
1" = 10'-0"

**NOTES:**

- ① Point "Bridge No. XX-XX"
- ② Point "Avenue 11 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
- 8 Bearing of Avenue 11 to be determined.
- 9 Existing underground and overhead utilities to be determined.

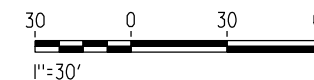
**LEGEND:**

- Direction of traffic
- Point of minimum vertical clearance

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 6'-0"
LENGTH	= 243'-3"
WIDTH	= 47'-6"
AREA	= 11,578 ft <sup>2</sup>
COST/ CFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

**REPLACEMENT SHEET  
ADDENDUM 7 - RFP HSR 11-16**

**LOCATION 3**



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	EC	HL	HL	REVISED FOR ADDENDUM 7

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



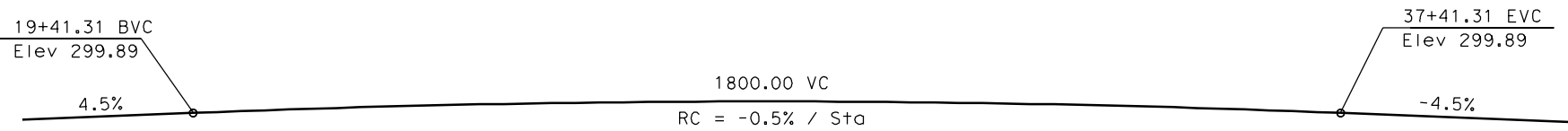
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 11 OVERHEAD  
PLANNING STUDY**

CONTRACT NO. HSR06-007
DRAWING NO. ST1003-A7
SCALE As shown
SHEET NO. OF

12/17/2012 ADDENDUM 7 - RFP HSR 11-16

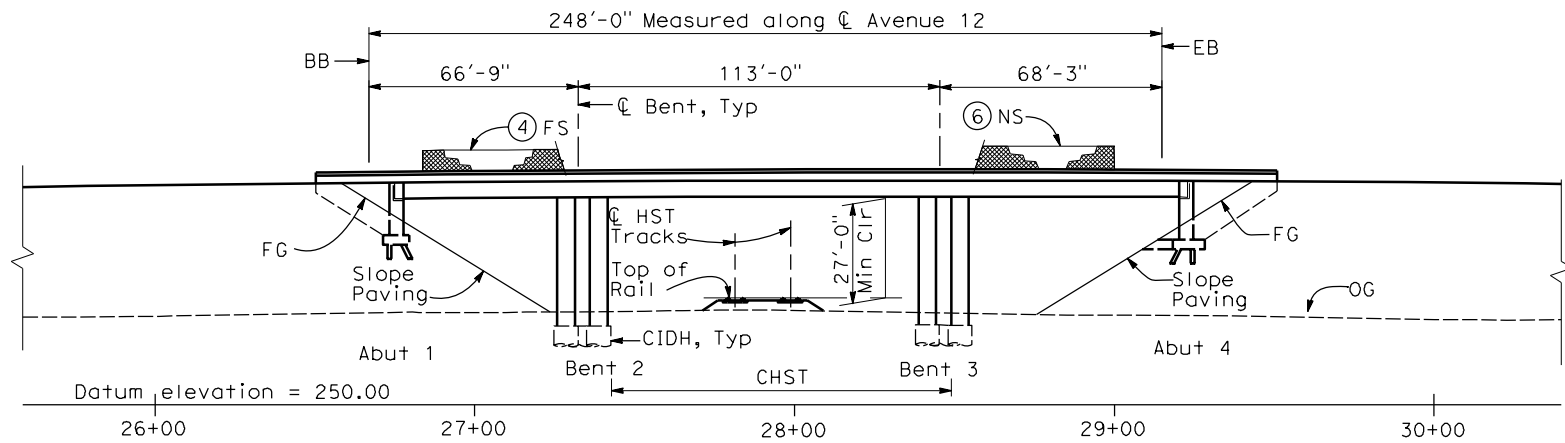


c:\user1\p001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\Cadd\Struct\Addendum A7\W-ML-ST-1004-A7.dgn 12/4/2012 2:25:13 PM



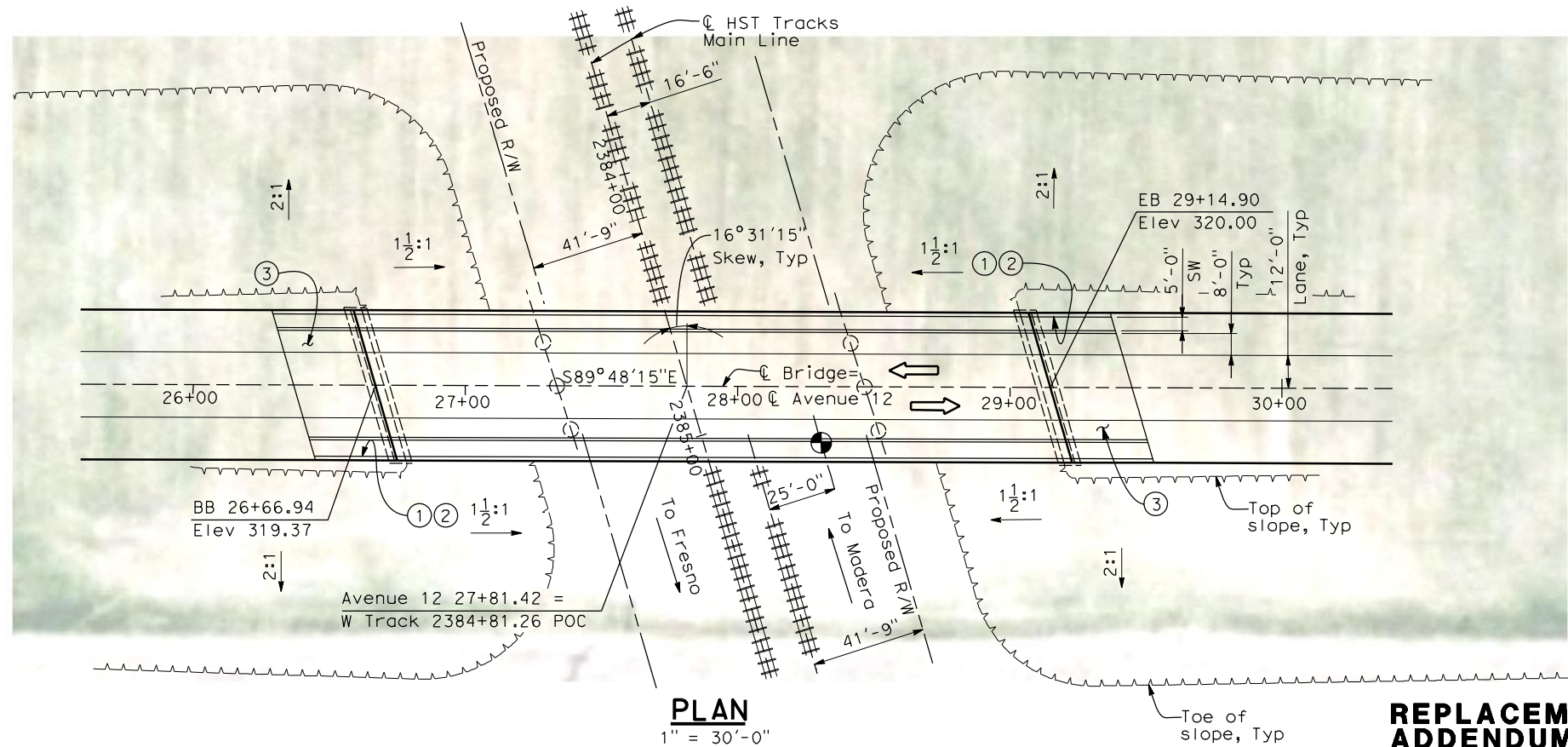
### PROFILE GRADE

NTS



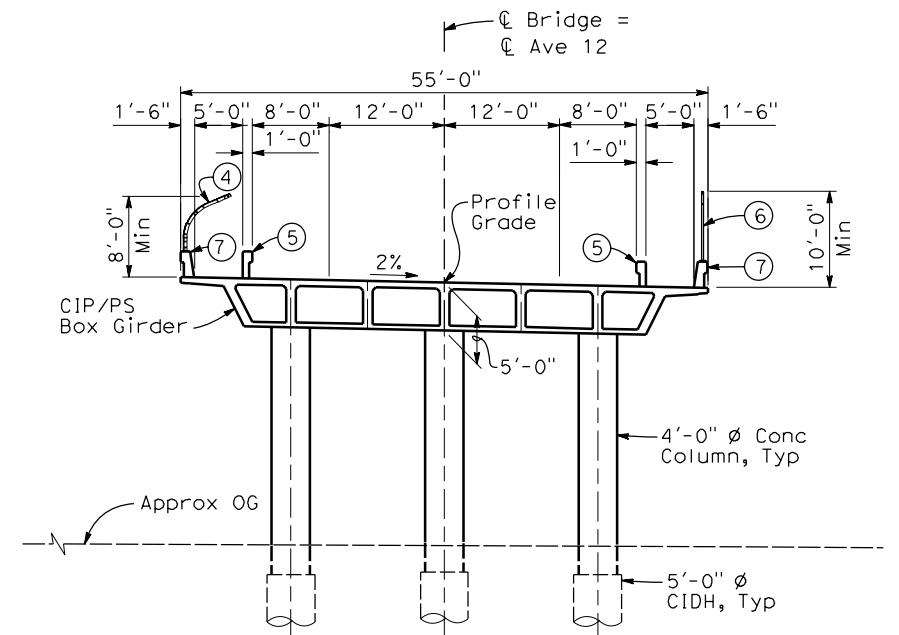
### ELEVATION

1" = 30'-0"



### PLAN

1" = 30'-0"



### TYPICAL SECTION

1" = 10'-0"

#### NOTES:

- ① Paint "Bridge No. XX-XX"
- ② Paint "Avenue 12 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
- 8 Bearing of Avenue 12 to be determined.
- 9 Existing underground and overhead utilities to be determined.

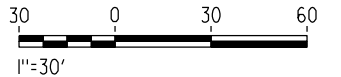
#### LEGEND:

- ← Direction of traffic
- Point of minimum vertical clearance

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 5'-0"
LENGTH	= 248'-0"
WIDTH	= 55'-0"
AREA	= 13,640 ft <sup>2</sup>
COST/ LFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

### REPLACEMENT SHEET ADDENDUM 7 - RFP HSR 11-16

#### LOCATION 4



REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	EC	HL	HL	REVISED FOR ADDENDUM 7

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



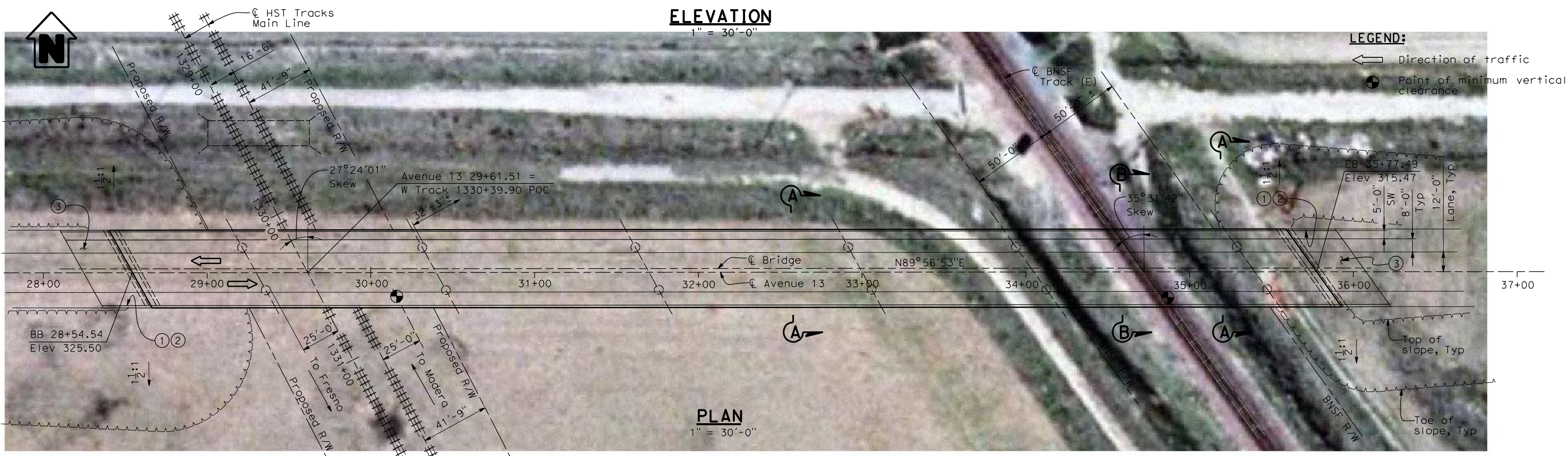
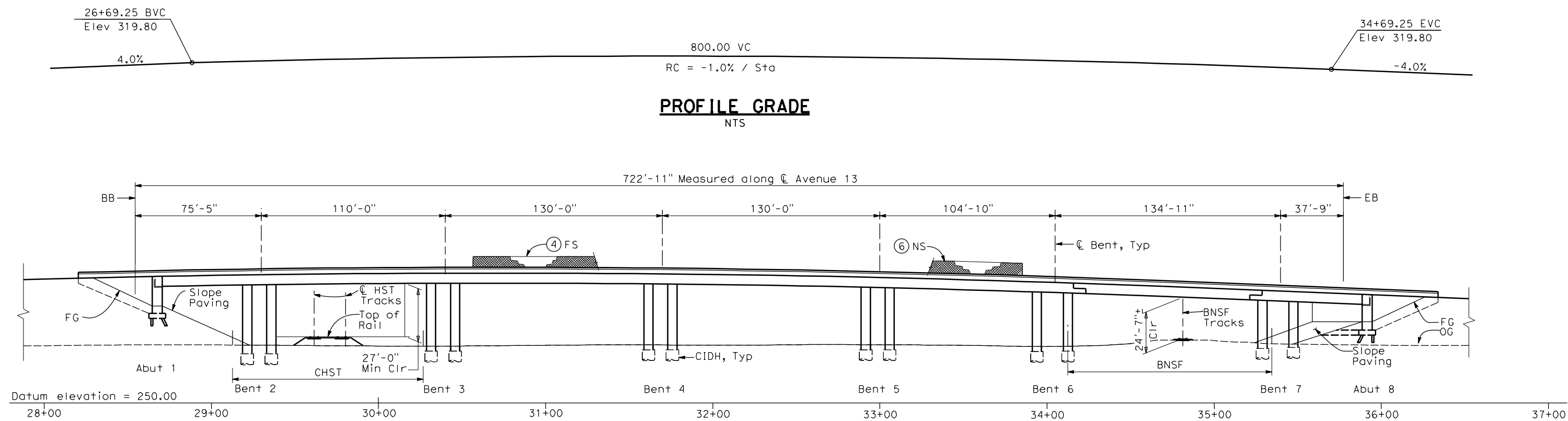
**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 12 OVERHEAD  
PLANNING STUDY**

CONTRACT NO. HSR06-007
DRAWING NO. ST1004-A7
SCALE As shown
SHEET NO. OF

12/17/2012 ADDENDUM 7 - RFP HSR 11-16

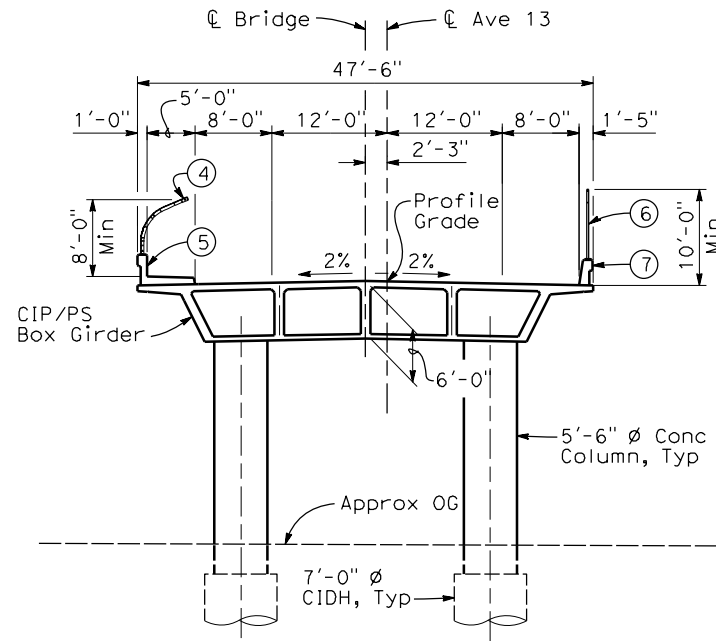




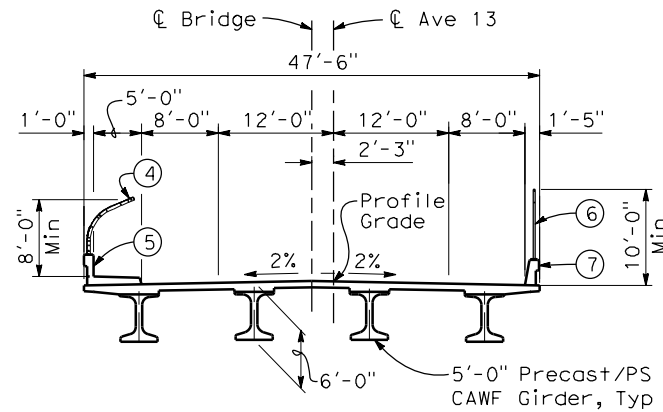
						DESIGNED BY H. LEE	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>	 Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811	 <b>CALIFORNIA</b> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> BNSF MAIN LINE AVENUE 21 AVENUE 13 OVERHEAD PLANNING STUDY - SHEET 1 OF 2	CONTRACT NO. HSR06-007
					DRAWN BY E. CISNEROS	DRAWING NO. ST1005					
					CHECKED BY J. RENTERIA	SCALE As shown					
1	01/13/12	HL	JR	AB	IN CHARGE A. BOONE	SHEET NO. OF					
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 01/13/2012					



cisnerose 1/12/2012 7:07:31 PM \\usscri1p001\Cadd\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Struct\Sheet\W-ML-ST-OH\_Ave\_13a.dgn



**SECTION A-A**  
1"=10'-0"



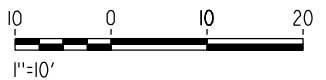
**SECTION B-B**  
1"=10'-0"

DATE OF ESTIMATE	=	
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	722'-11"
WIDTH	=	47'-6"
AREA	=	28,860 ft <sup>2</sup>
COST/ LFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	

**NOTES:**

- ① Paint "Bridge No. XX-XX"
- ② Paint "Avenue 13 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
8. Bearing of Avenue 13 to be determined.
9. Existing underground and overhead utilities to be determined.

**LOCATION 5**



REV	DATE	BY	CHK	APP	DESCRIPTION
1	01/13/12	HL	JR	AB	

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

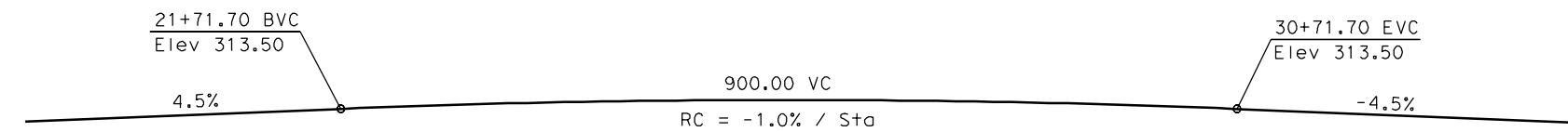
**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 13 OVERHEAD  
PLANNING STUDY - SHEET 2 OF 2**

CONTRACT NO. HSR06-007
DRAWING NO. ST1005A
SCALE As shown
SHEET NO. OF

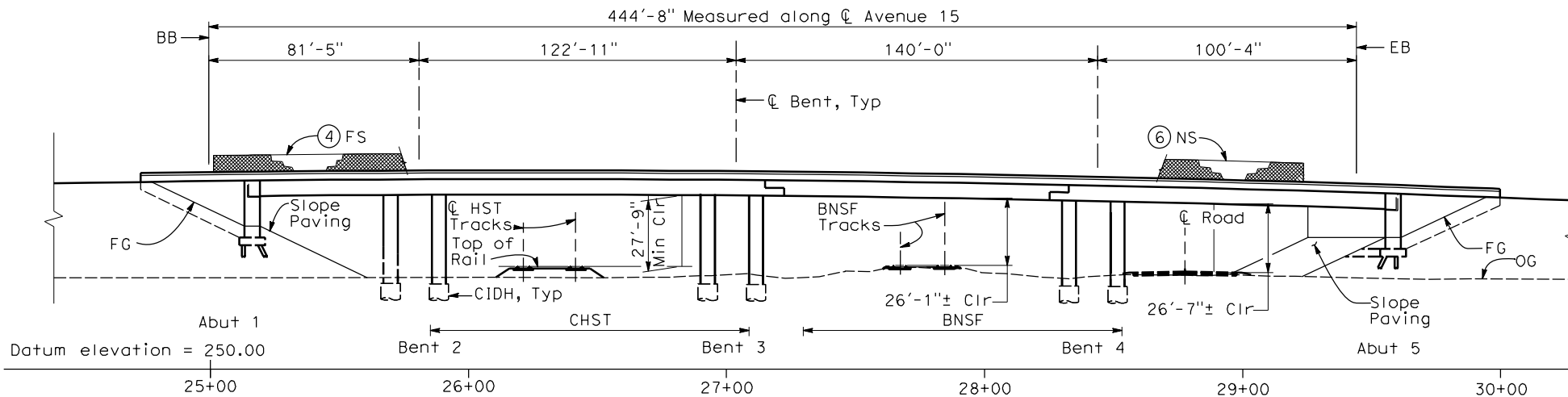
c:\user\fp001\cadd\CHSR\60022962\Task-03\_Merced-Fresno\cadd\Struct\Addendum A7\ML-ST-1006-A7.dgn 12/4/2012 2:27:01 PM



### PROFILE GRADE

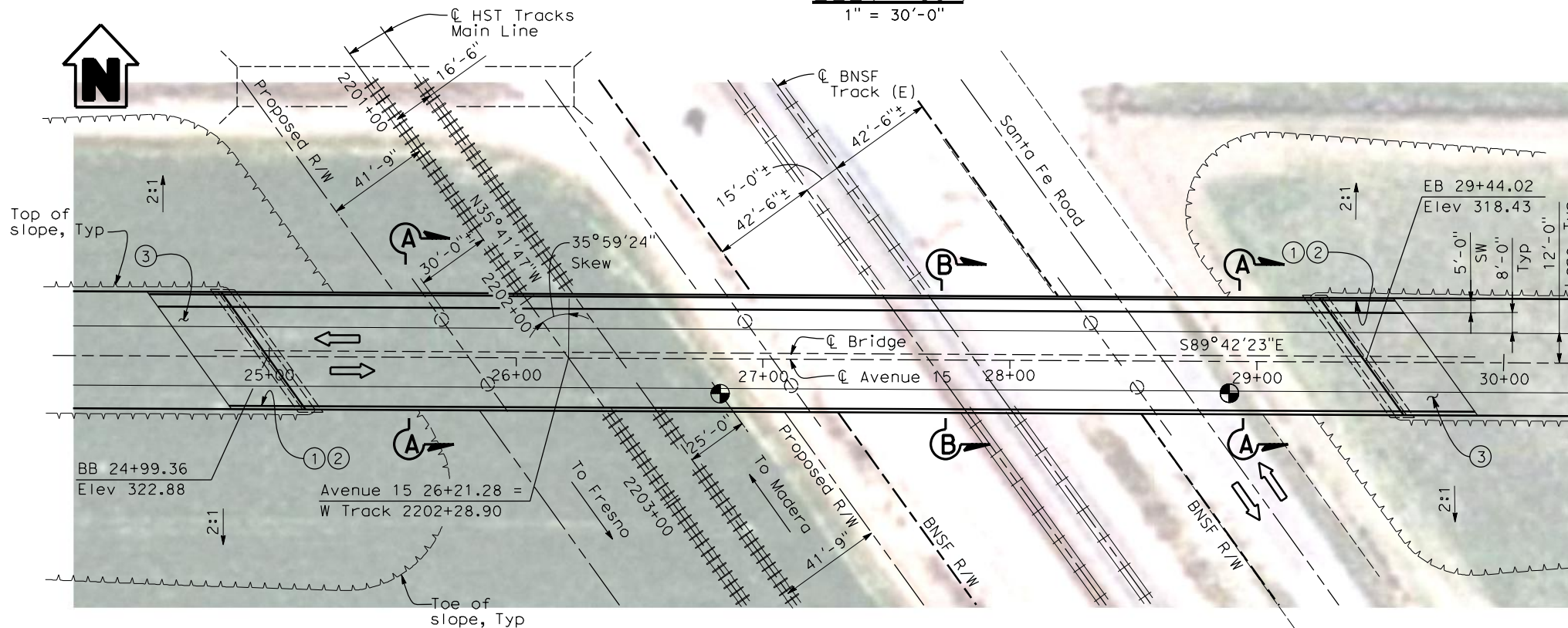
NTS

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 6'-0"
LENGTH	= 444'-8"
WIDTH	= 47'-6"
AREA	= 21,125 ft <sup>2</sup>
COST/ SFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=



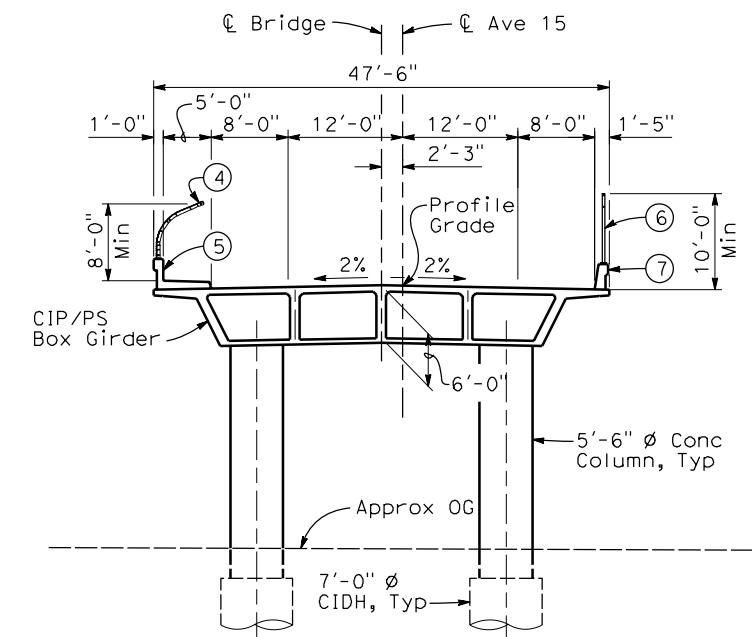
### ELEVATION

1" = 30'-0"



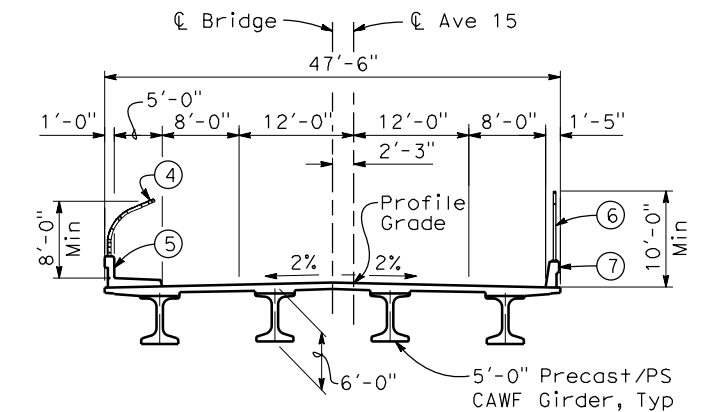
### PLAN

1" = 30'-0"



### SECTION A-A

1"=10'-0"



### SECTION B-B

1"=10'-0"

#### NOTES:

- ① Paint "Bridge No. XX-XX"
- ② Paint "Avenue 15 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
8. Bearing of Avenue 15 to be determined.
9. Existing underground and overhead utilities to be determined.

#### LEGEND:

- Direction of traffic
- ⊕ Point of minimum vertical clearance
- Pt = Petroleum
- UG = Underground

### REPLACEMENT SHEET ADDENDUM 7 - RFP HSR 11-16

LOCATION 6

REV	DATE	BY	CHK	APP	DESCRIPTION
A	2012-12	EC	HL	HL	REVISED FOR ADDENDUM 7

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 01/13/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

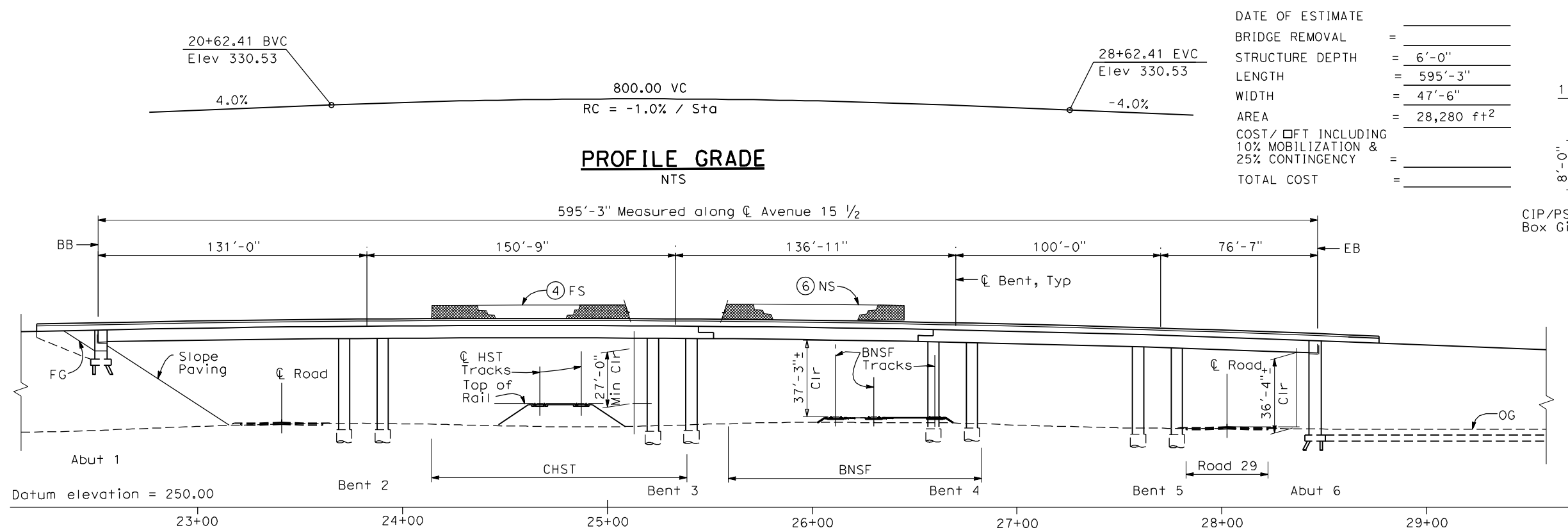
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 15 OVERHEAD  
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1006-A7
SCALE As shown
SHEET NO. OF

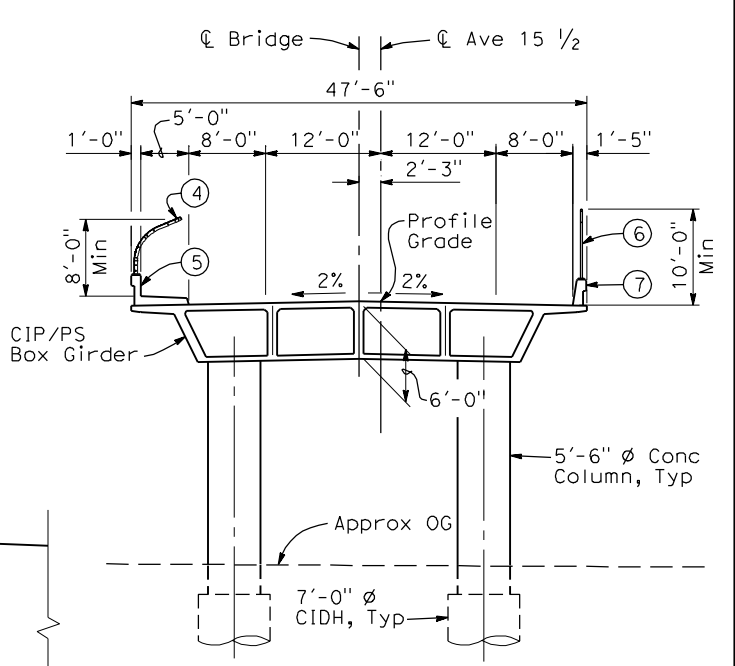
12/17/2012 ADDENDUM 7 - RFP HSR 11-16



4/28/2011 4:45:39 PM I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Struct\Sheet\APS\A1\15% cost reduction submittal\GradeStructure\A1-21ML2.W-ML-ST-OH\_Ave 15.5.dgn

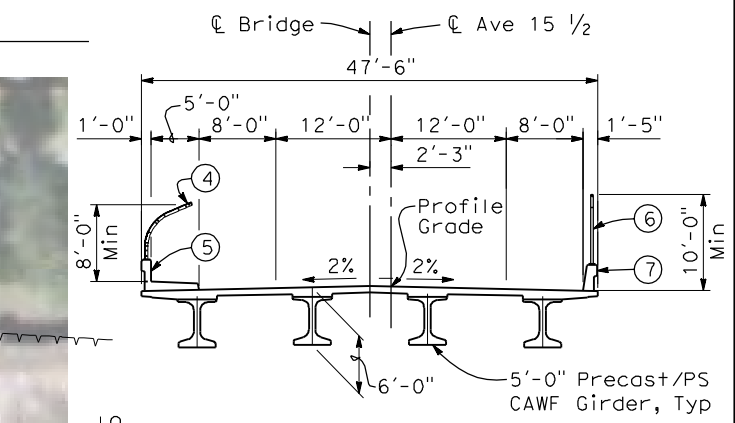


DATE OF ESTIMATE	=	
BRIDGE REMOVAL	=	
STRUCTURE DEPTH	=	6'-0"
LENGTH	=	595'-3"
WIDTH	=	47'-6"
AREA	=	28,280 ft <sup>2</sup>
COST/ SFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=	
TOTAL COST	=	



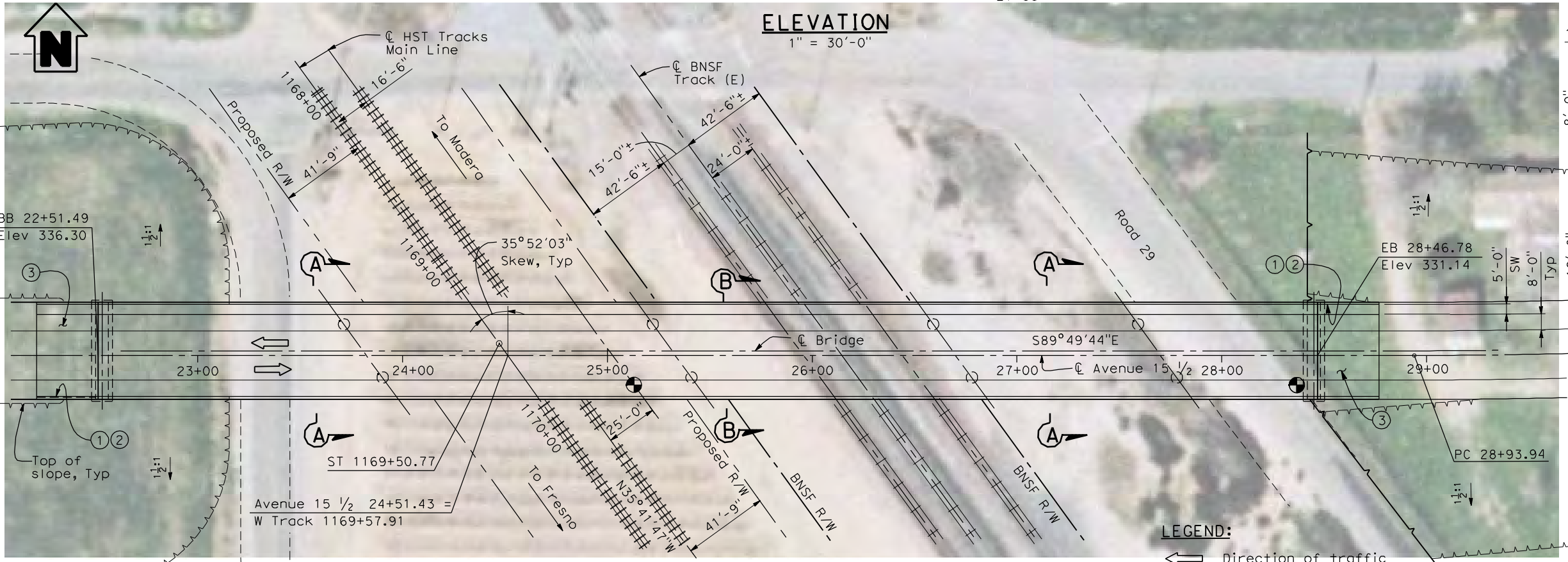
SECTION A-A

1"=10'-0"



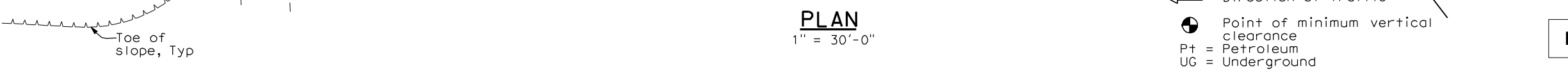
SECTION B-B

1"=10'-0"



ELEVATION

1" = 30'-0"



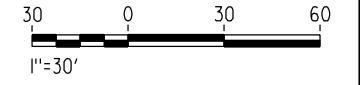
PLAN

1" = 30'-0"

- LEGEND:
- Direction of traffic
  - Point of minimum vertical clearance
  - Pt = Petroleum
  - UG = Underground

- NOTES:
- Paint "Bridge No. XX-XX"
  - Paint "Avenue 15 1/2 OH"
  - Structure Approach Slab Type N (30S)
  - Chain Link Railing Type 3
  - Concrete Barrier Type 26 (Mod)
  - Chain Link Railing Type 7 (Mod)
  - Concrete Barrier Type 732
  - Bearing of Avenue 15 1/2 to be determined.
  - Existing underground and overhead utilities to be determined.

LOCATION 7



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
H. LEE  
DRAWN BY  
E. CISNEROS  
CHECKED BY  
J. RENTERIA  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

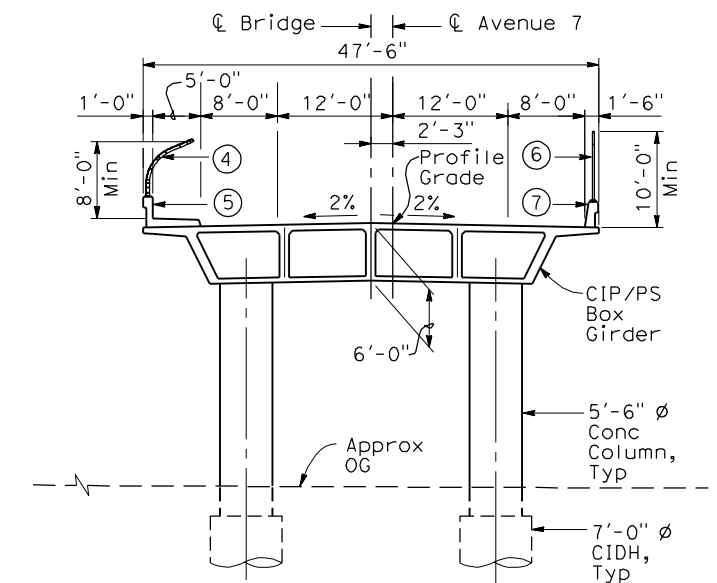
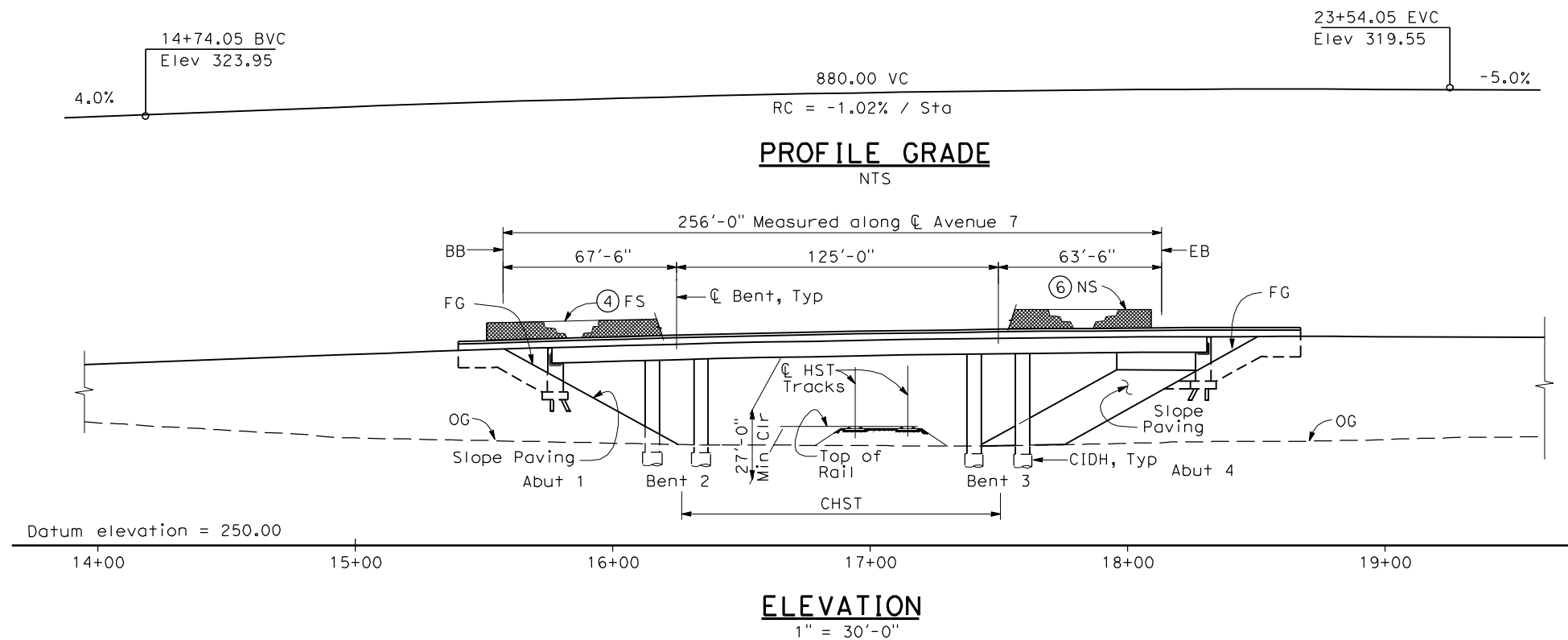
RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 15 1/2 OVERHEAD  
PLANNING STUDY

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
ST1007  
SCALE  
As shown  
SHEET NO.  
OF



#### NOTES:

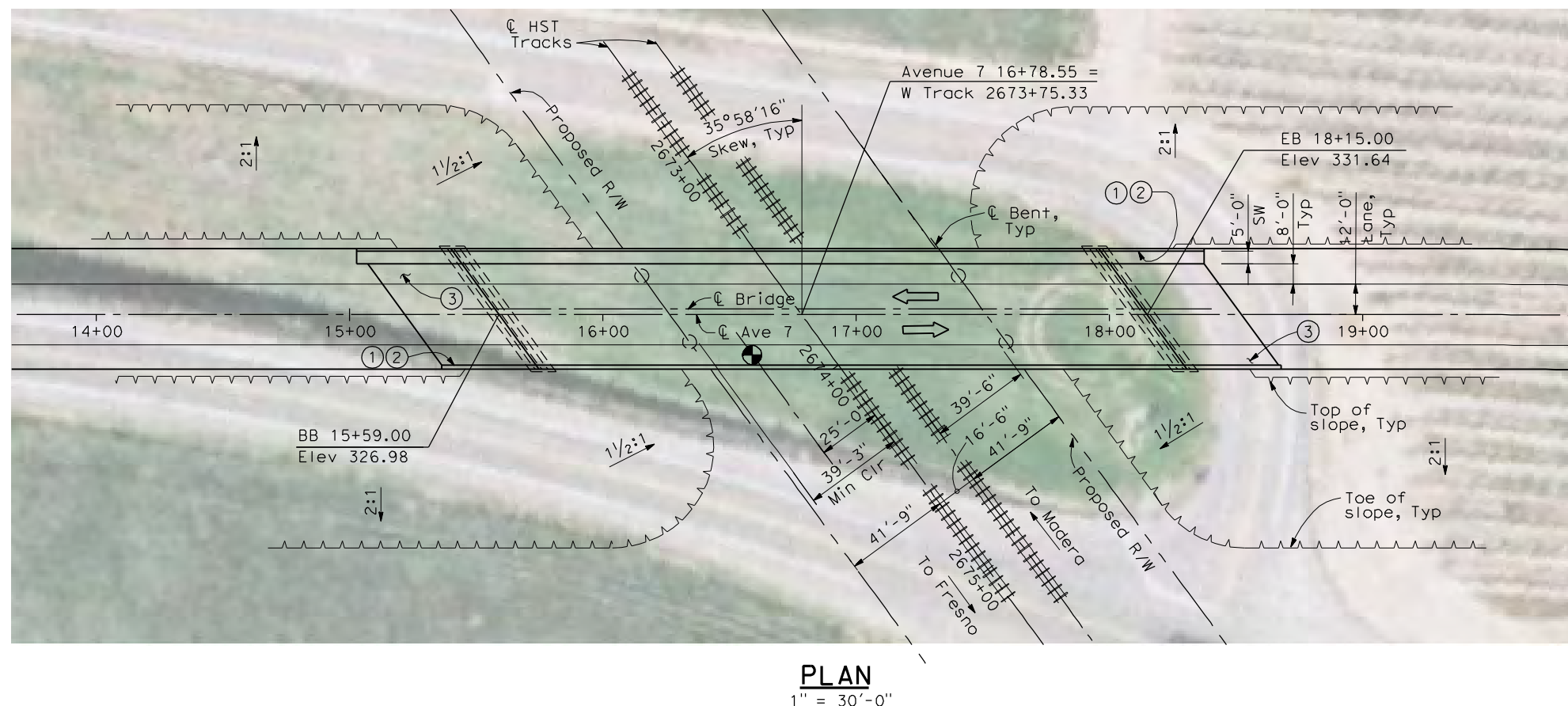
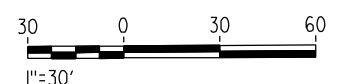
- ① Paint "Bridge No. XX-XX"
- ② Paint "Avenue 7 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
8. Bearing of Avenue 7 to be determined.
9. Existing underground and overhead utilities to be determined.

#### LEGEND:

- ← Direction of traffic
- Point of minimum vertical clearance

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 6'-0"
LENGTH	= 256'-0"
WIDTH	= 47'-6"
AREA	= 12,160 ft <sup>2</sup>
COST/ CFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

**LOCATION 65**



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY J. HODELL
CHECKED BY L. LEUNG
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
15% DESIGN  
SUBMITTAL

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 7 OVERHEAD  
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1070
SCALE AS SHOWN
SHEET NO. OF



# CALIFORNIA HIGH-SPEED TRAIN

## Roadway Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
Merced to Fresno Section

Volume 2: Caltrans Facilities Modifications  
HYBRID Alternative

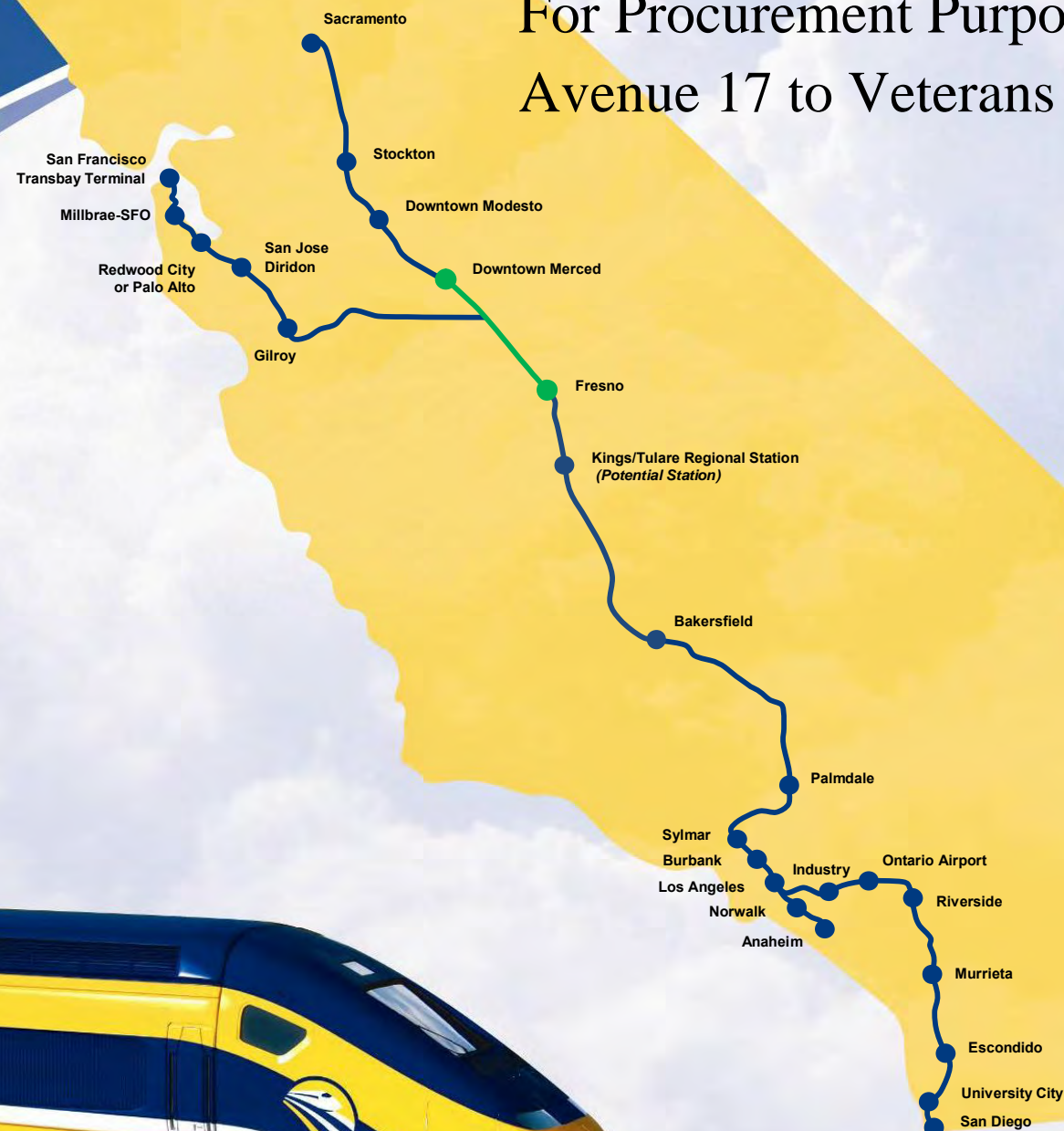
May 2011



**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration






4/27/2011 7:10:26 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 2b - hybrid caltrans facilities\Index Of Drawings\B7190-B.dgn

oyeled

LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
GENERAL						
		B7190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B7191-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B7200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B7201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		CB7200-B	UPRR/SR99 MAINLINE DO/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	KEY MAP	SHEET 1 OF 1
		CB7201-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD - INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CB7202-B	UPRR/SR99 MERCED - (HYBRID)	LE GRAND RD - INTERCHANGE	KEY MAP	SHEET 1 OF 1
		CB7203-B	UPRR/SR99 MAINLINE DO/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	KEY MAP	SHEET 1 OF 1
		CT7190-B	HYBRID	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		CT7191-B	HYBRID	HIGHWAY	TYPICAL CROSS SECTIONS	SHEET 2 OF 2
		CT7192-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
LAYOUT						
43		CT2000-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 1 OF 4
43		CT2001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 1 OF 3
43		CT2002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 2 OF 3
43		CT2003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	LAYOUT	SHEET 3 OF 3
44		CT2004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	LAYOUT	SHEET 1 OF 3
44		CT2005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	LAYOUT	SHEET 2 OF 3
44		CT2006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	LAYOUT	SHEET 3 OF 3
39		CT7200-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	LAYOUT	SHEET 1 OF 4
39		CT7201-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	LAYOUT	SHEET 2 OF 4
39		CT7202-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	LAYOUT	SHEET 3 OF 4
39		CT7203-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	LAYOUT	SHEET 4 OF 4
35,1		CT7204-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 1 OF 4
35,1		CT7205-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 2 OF 4
35,1		CT7206-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 3 OF 4
35,1		CT7207-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	LAYOUT	SHEET 4 OF 4
19		CT7208-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 1 OF 5
19		CT7209-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 2 OF 5
19		CT7210-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 3 OF 5
19		CT7211-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 4 OF 5
19		CT7212-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	LAYOUT	SHEET 5 OF 5
19		CT7213-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	LAYOUT	SHEET 1 OF 2
19		CT7214-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	LAYOUT	SHEET 2 OF 2
39		CT7215-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	LAYOUT	SHEET 1 OF 3
39		CT7216-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	LAYOUT	SHEET 2 OF 3
39		CT7217-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	LAYOUT	SHEET 3 OF 3
PROFILE						
43		CT3000-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 1 OF 4
43		CT3001-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 1 OF 3
43		CT3002-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 2 OF 3
43		CT3003-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - AVENUE 8	PROFILE	SHEET 3 OF 3
44		CT3004-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	PROFILE	SHEET 1 OF 3
44		CT3005-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	PROFILE	SHEET 2 OF 3
44		CT3006-A	BNSF MAIN LINE - (HYBRID)	GRADE SEPARATION - SR 145	PROFILE	SHEET 3 OF 3
39		CT8200-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	PROFILE	SHEET 1 OF 4
39		CT8201-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	PROFILE	SHEET 2 OF 4
39		CT8202-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	PROFILE	SHEET 3 OF 4
39		CT8203-B	BNSF MAINLINE/MERCED DO - (HYBRID)	GRADE SEPARATION - ROBERTSON BLVD (SR 233) ALT 1	PROFILE	SHEET 4 OF 4
35,1		CT8204-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 1 OF 4
35,1		CT8205-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 2 OF 4
35,1		CT8206-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 3 OF 4
35,1		CT8207-B	UPRR/SR99 MERCED DO - (HYBRID)	SANDY MUSH RD INTERCHANGE	PROFILE	SHEET 4 OF 4
19		CT8208-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 1 OF 5
19		CT8209-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 2 OF 5
19		CT8210-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 3 OF 5
19		CT8211-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 4 OF 5
19		CT8212-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION - LE GRAND RD INTERCHANGE	PROFILE	SHEET 5 OF 5
19		CT8213-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 1 OF 4
19		CT8214-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB ON-RAMP	PROFILE	SHEET 2 OF 4
19		CT8215-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 3 OF 4
19		CT8216-B	UPRR/SR99 MERCED - (HYBRID)	GRADE SEPARATION-LE GRAND RD IC SR99 SB OFF-RAMP	PROFILE	SHEET 4 OF 4
39		CT8217-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	PROFILE	SHEET 1 OF 3
39		CT8218-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	PROFILE	SHEET 2 OF 3
39		CT8219-B	BNSF MAINLINE/MERCED DO - (HYBRID)	UNDERPASS - ROBERTSON BLVD (SR 233) ALT 2	PROFILE	SHEET 3 OF 3

"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL	AECOM Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811		CALIFORNIA HIGH-SPEED RAIL AUTHORITY	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO		CONTRACT NO. HSR06-007
						DRAWN BY C. DELOS REYES					DRAWING NO. B7190-B	SCALE NONE	SHEET NO. ### OF ###
						CHECKED BY A. SILVER							
						IN CHARGE A. BOONE							
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011	NOT FOR CONSTRUCTION					SHEET 1 OF 1	



4/27/2011 7:09:46 PM P:\60022962\Task 02\_Merced-Fresno\cadd\Civil\Sheet\Package 3 - Hybrid\Volume 2B - Hybrid Caltrans Facilities\Abbreviation\B7191-B.dgn  
oyeled

ABBREVIATIONS

ALIGNMENT

HORIZONTAL	
BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR
VERTICAL	
BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
CL	CENTER LINE
CLR	CENTERLINE, CLASS
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
	GAS LINE (16")
	COMMUNICATION LINE
	WATER LINE
	FIBER OPTIC LINE
	ELECTRICAL LINE
	ELECTRICAL TOWER
	SEWER LINE
	STORM DRAIN LINE
	FUEL LINE
	TELEPHONE LINE
	PETROLEUM LINE (12")
	OVERHEAD
	NORTH ARROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

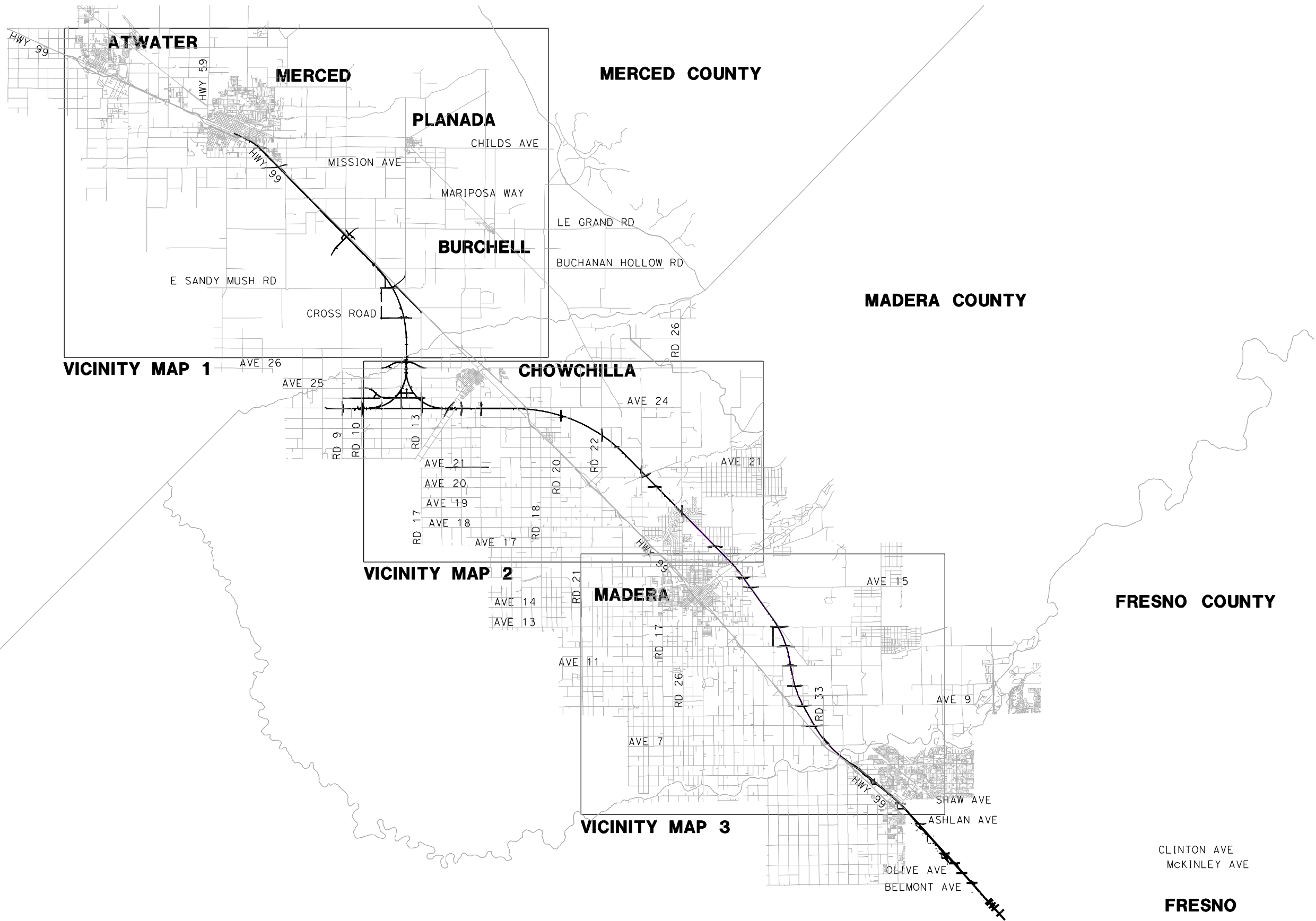
RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION



CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID  
GENERAL  
ABBREVIATIONS, SYMBOLS AND NOTES  
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B7191-B
SCALE NO SCALE
SHEET NO. ### OF ###

2/16/2012 12:00:00 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1 - 15% Plans\CADD\Sheet\HYBRID\A1 HYBRID\B7200-B\_REV2.dgn  
GibsonR1



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
D. AYELE  
DRAWN BY  
A. TRINH  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID

INDEX MAP  
SHEET 1 OF 2

CONTRACT NO.  
HSR06-007

DRAWING NO.  
B7200-B

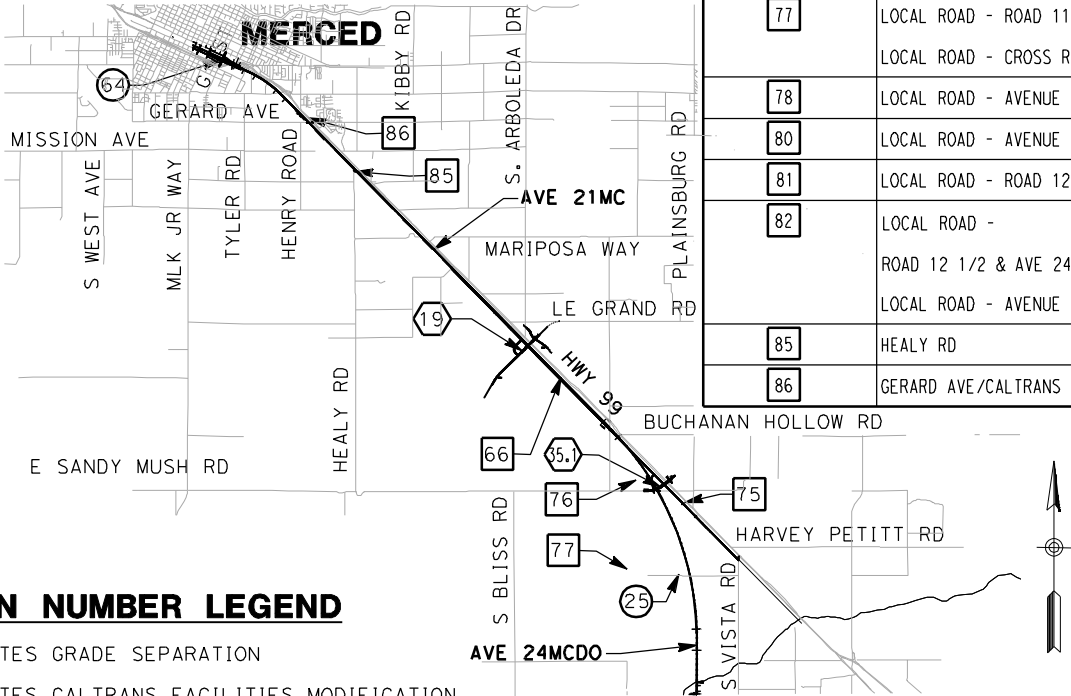
SCALE  
NO SCALE

SHEET NO.  
### OF ###



2/16/2012 11:52:55 AM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr\Rev 1 - 15% Plans\CADD\Sheet\PLANS\HYBRID\A1 HYBRID\B7201-B\_REV2.dgn GibsonR1

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1 UNDERPASS - AVENUE 26 ALT 2	CT5227-B - CT5236-B CT5246-B - CT5248-B	ST1135
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

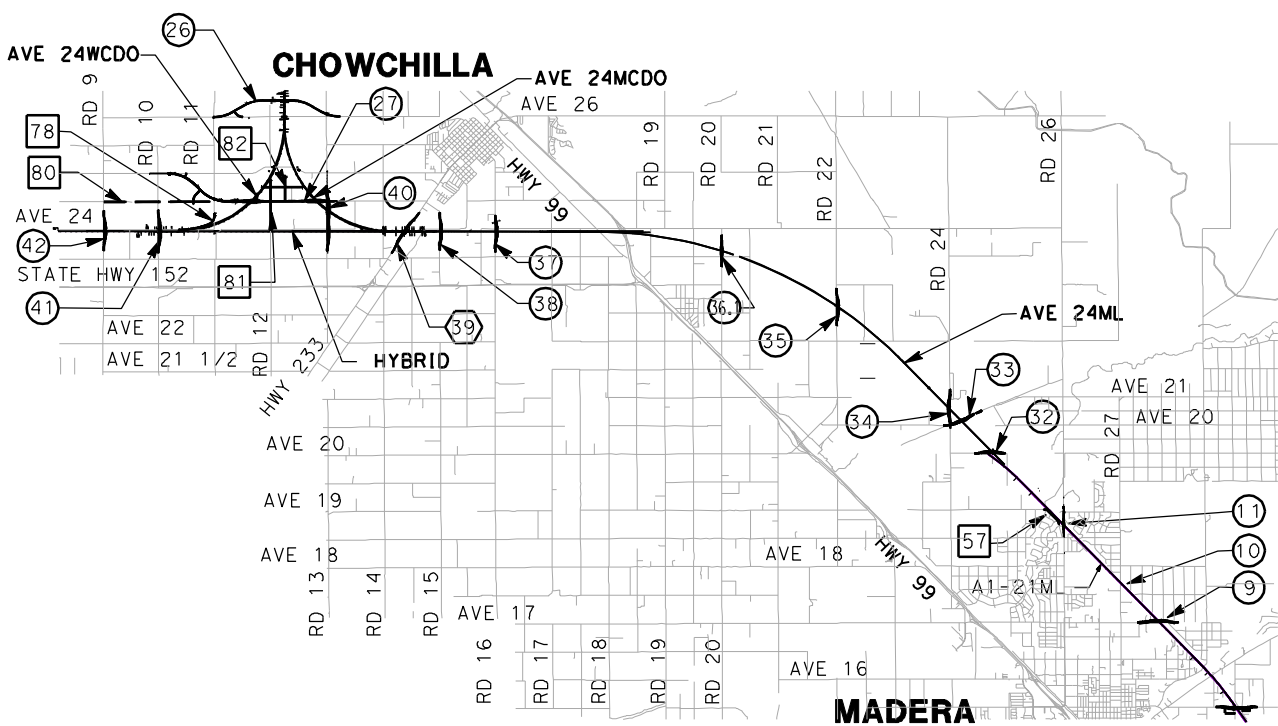


LOCATION NUMBER LEGEND

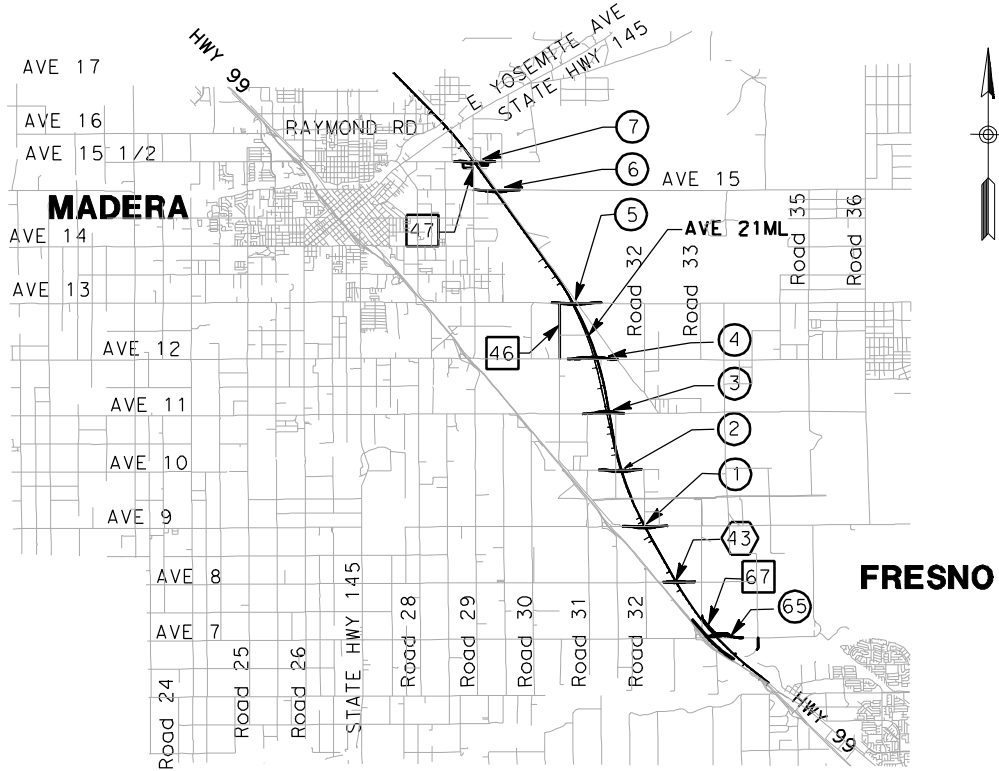
- (X) - INDICATES GRADE SEPARATION
- (X) - INDICATES CALTRANS FACILITIES MODIFICATION
- (X) - INDICATES LOCAL ROAD RELOCATION

VICINITY MAP 1

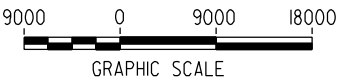
LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1 UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7200-B - CT7203-B CT7215-B - CT7217-B	ST1150
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1 GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5200-B - CT5202-B CT5249-B - CT5251-B	ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD LOCAL ROAD - WEST FRONTAGE ROAD	CR9210-B CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11 LOCAL ROAD - CROSS ROAD	CR9208-B - CR9209-B CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4 LOCAL ROAD - AVENUE 24 3/4	CR9215-B CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	



VICINITY MAP 2



VICINITY MAP 3



FOR ROADWAY STRUCTURES  
SEE STRUCTURAL  
INDEX MAPS

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
T. WALTZ  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID**

INDEX MAP  
SHEET 2 OF 2

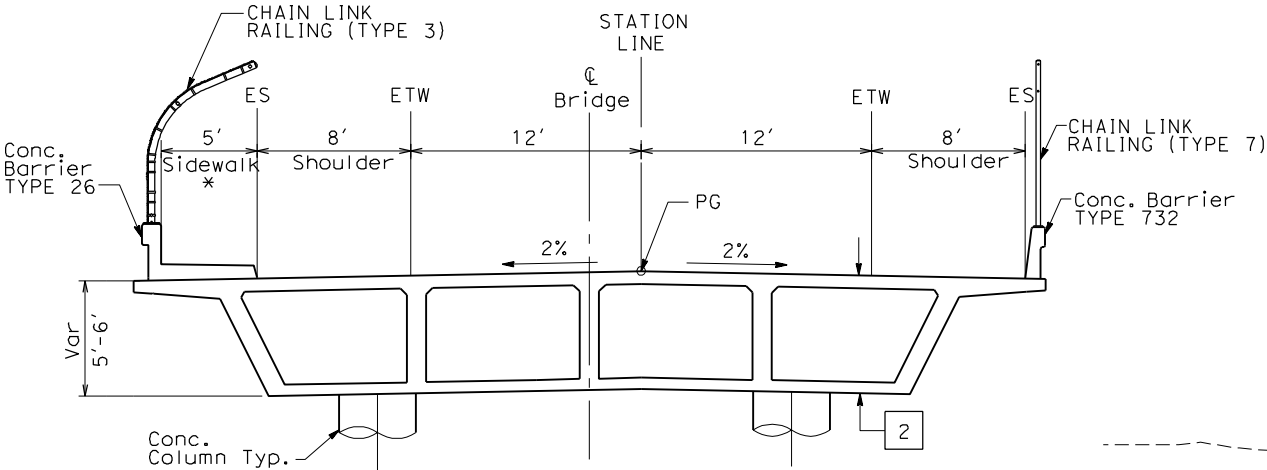
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
B7201-B  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###

4/27/2011 7:20:02 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 2b - hybrid\caltrans facilities\typical Section\CT7190-B.dgn

NOTES:

1. DIMENSIONS OF EXISTING PAVEMENT WIDTHS ARE BASED ON MEASUREMENTS MADE IN THE FIELD AND ARE APPROXIMATE.
2. PAVEMENT SECTIONS ARE TO BE DETERMINED. GEOTECHNICAL INVESTIGATIONS WILL BE CONDUCTED IN A SUBSEQUENT PHASE TO DETERMINE STRUCTURAL SECTIONS FOR EACH CROSSING.
3. SPACING OF BENCHES ON PROPOSED FILL SECTIONS ARE TO BE DETERMINED.
4. RIGHT-OF-WAY (R/W) WIDTH IS FOR INFORMATION ONLY. EXACT WIDTH TO BE DETERMINED IN COORDINATION WITH AFFECTED AGENCY.

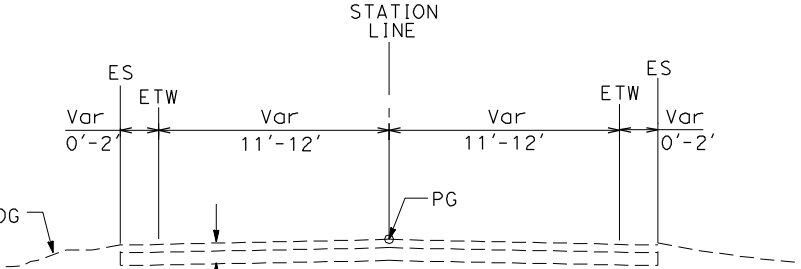
\*SIDEWALK SHOWN ON WESTBOUND SIDE, EASTBOUND SIMILAR  
SEE LAYOUT SHEETS FOR DETAILS.



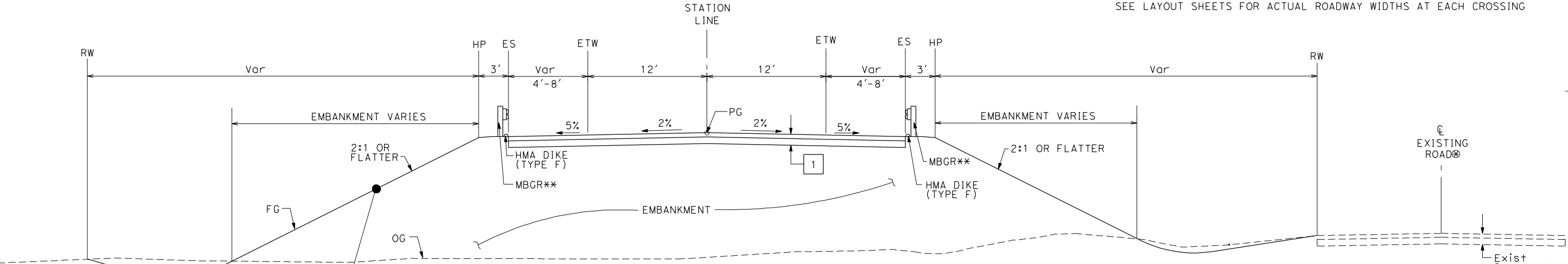
**OVERHEAD STRUCTURE**  
SEE STRUCTURAL PLANS

STRUCTURAL SECTIONS:

- 1 HMA TYPE A  
AB CLASS 2
- 2 CAST IN PLACE / PRESTRESSED  
BOX GIRDER (6' STRUCTURE DEPTH)

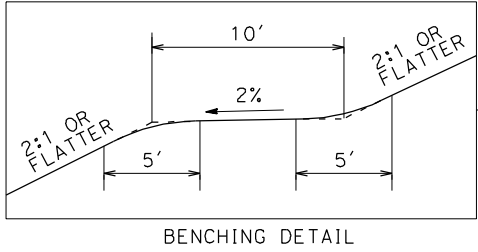


**EXISTING LOCAL ROAD**  
WEST SIDE SHOWN (EAST SIDE SIMILAR)  
SEE LAYOUT SHEETS FOR ACTUAL ROADWAY WIDTHS AT EACH CROSSING



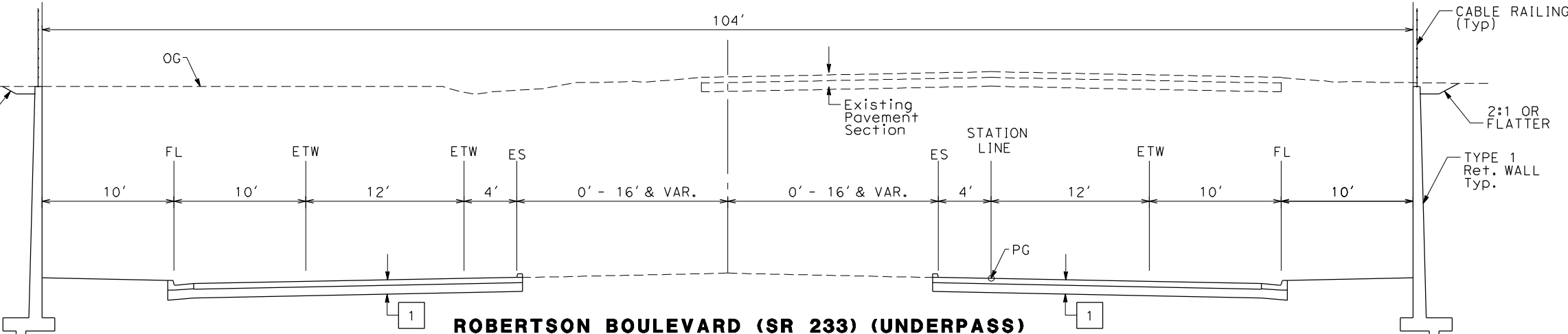
**FILL SECTIONS TO OVERHEAD STRUCTURE**  
WEST SIDE SHOWN (EAST SIDE SIMILAR)

⊗ EXISTING ROAD LOCATION VARIES AND SHALL REMAIN OPEN DURING CONSTRUCTION. WHERE SHOWN ON THE PLAN CLOSE AND OBLITERATE EXISTING ROADWAY SUBSEQUENT TO CONSTRUCTION OF THE REALIGNED ROADWAY.  
\*\* EXACT LIMITS OF MBGR PER AGENCY REQUIREMENTS.



TYPICAL CROSS SECTIONS ON THIS SHEET APPLY TO THE FOLLOWING ROADWAYS FOR ALIGNMENT A2, AVE 24 WYE OPTION & WEST CHOWCHILLA OPTION:

NO.	STREET NAME
1	SR233 (ROBERTSON BOULEVARD)
2	LE GRAND
3	E. SANDY MUSH ROAD
4	AVENUE 11
5	AVENUE 8
6	SR 233 (ROBERTSON BOULEVARD UNDERPASS)



**ROBERTSON BOULEVARD (SR 233) (UNDERPASS)**

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**

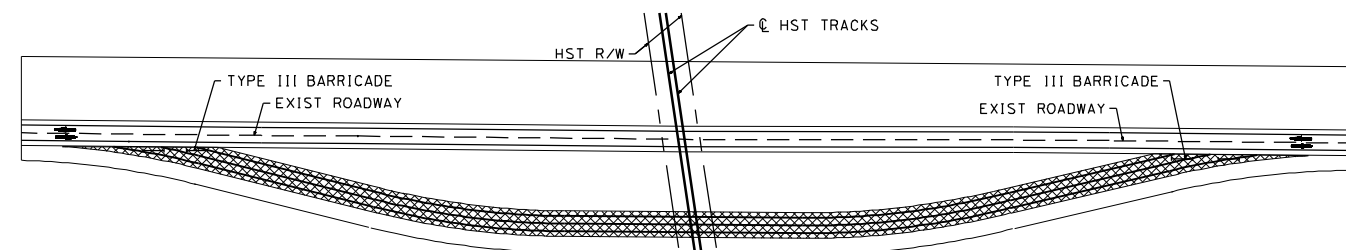


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
HYBRID  
HIGHWAY  
TYPICAL CROSS SECTIONS  
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CT7190-B
SCALE NTS
SHEET NO. ### OF ###

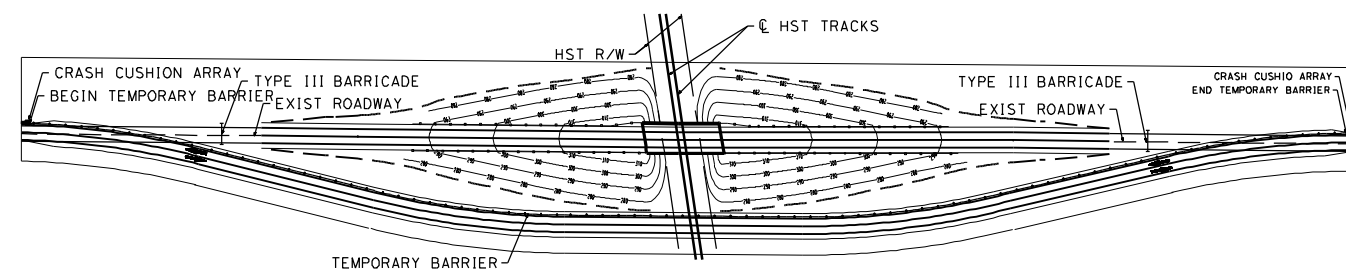


# STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN CENTERED PROPOSED ALIGNMENT



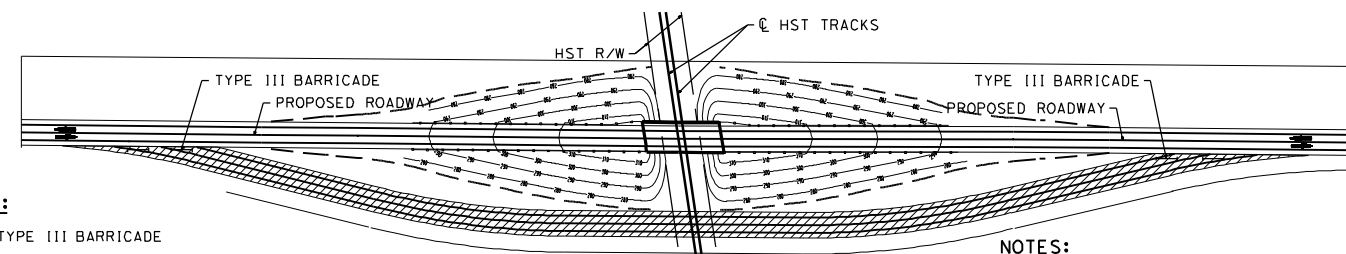
STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT TEMPORARY DETOUR ROAD



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY

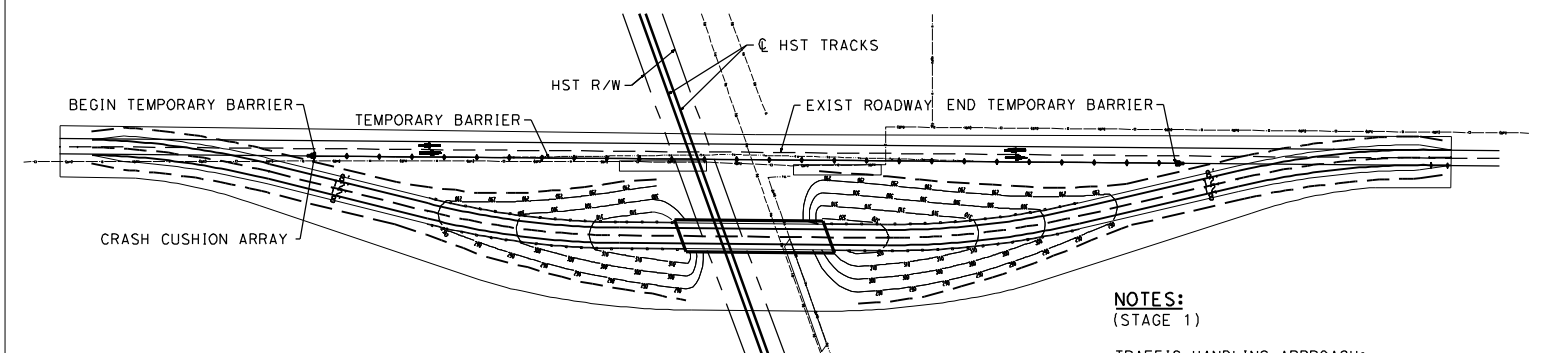


STAGE CONSTRUCTION (STAGE 3)

NOTES:  
(STAGE 3)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- REMOVE TEMPORARY DETOUR ROAD

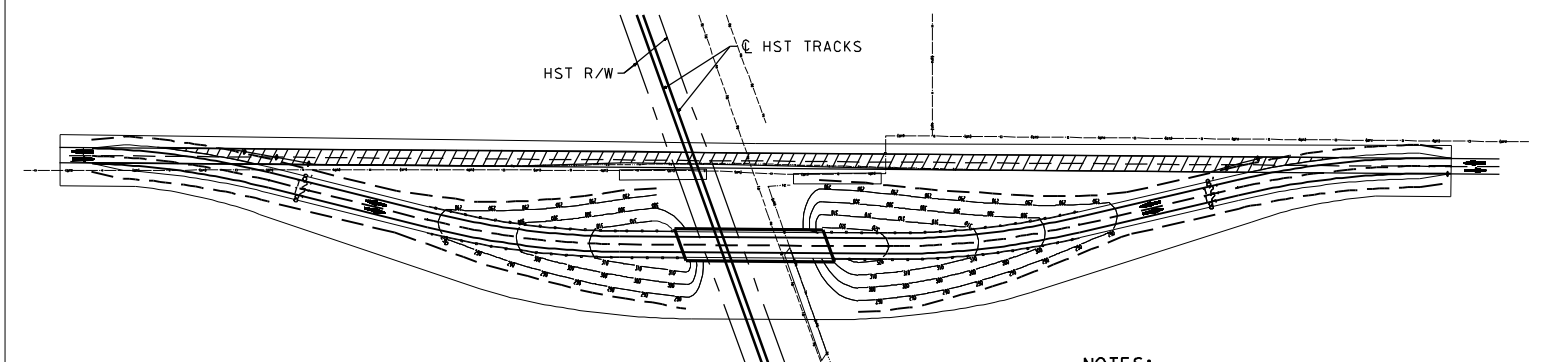
- LEGEND:
- TYPE III BARRICADE
  - CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - CONSTRUCT TEMPORARY ROAD
  - REMOVE TEMPORARY ROAD

# STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN SHIFTED PROPOSED ALIGNMENT



STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 2)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT REALIGNED ROAD CONFORMS  
- COMPLETE DRAINAGE FACILITIES  
- REMOVE BASE AND SURFACING OF EXIST ROAD

- LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - REMOVE BASE AND SURFACING (EXIST ROAD)

USER=GibsonR1 12/1/2011 3:03:30 PM I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Civil\Sheet\ROADWAY\RECENT\_UPDATES\12-1-11\WF-CT-5000-A\_revised\_2.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	07/27/2011

RECORD SET 15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

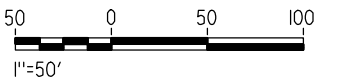


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

HYBRID  
GENERAL STAGE CONSTRUCTION &  
TRAFFIC HANDLING APPROACH  
SHEET 1 OF 1

CONTRACT NO.	HSR06-007
DRAWING NO.	CT7192-B
SCALE	NO SCALE
SHEET NO.	### OF ###





DESIGNED BY	R. GIBSON
DRAWN BY	H. PHAN
CHECKED BY	A. SILVER
IN CHARGE	A. BOONE
DATE	04/29/2011



CONTRACT NO.  
HSR06-007

DRAWING NO.  
CT2001-A

SCALE  
AS SHOWN

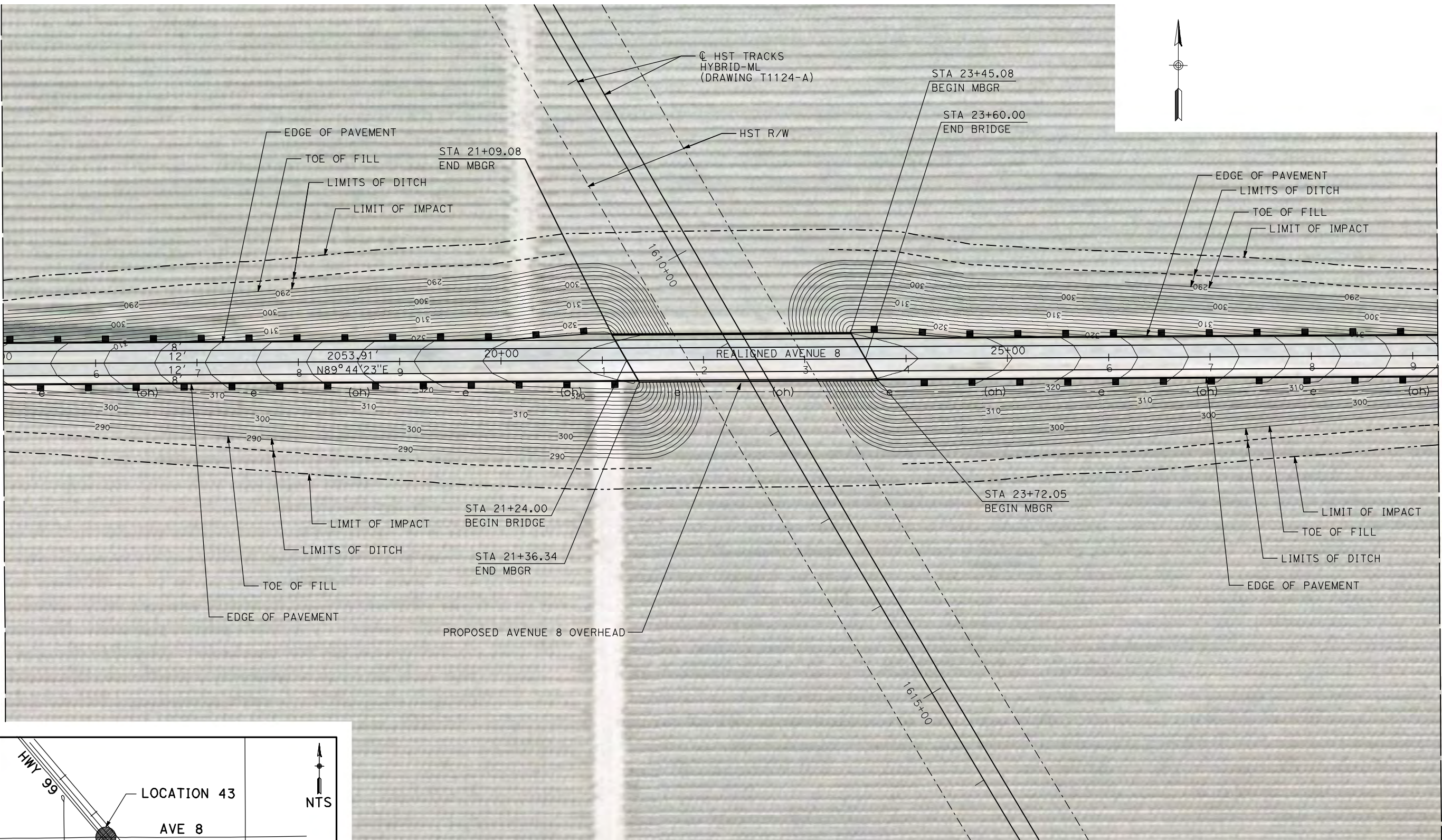
SHEET NO. OF ###



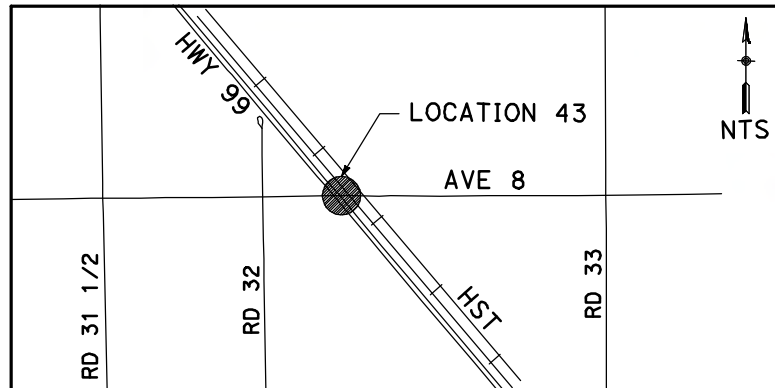
5/1/2011 1:50:38 PM i:\chsr\60022962\Task-02\_merced-fresno\cadd\civil\sheet\roadway\Cost Reduction\Grade Sep Plan\WF-CT-2002-A.dgn

GibsonR1

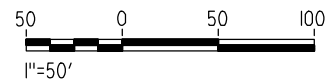
MATCH LINE STA 15+00  
SEE DRAWING CT2001-A



MATCH LINE STA 29+25  
SEE DRAWING CT2003-A



**NOTE:**  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 8  
LAYOUT  
SHEET 2 OF 3

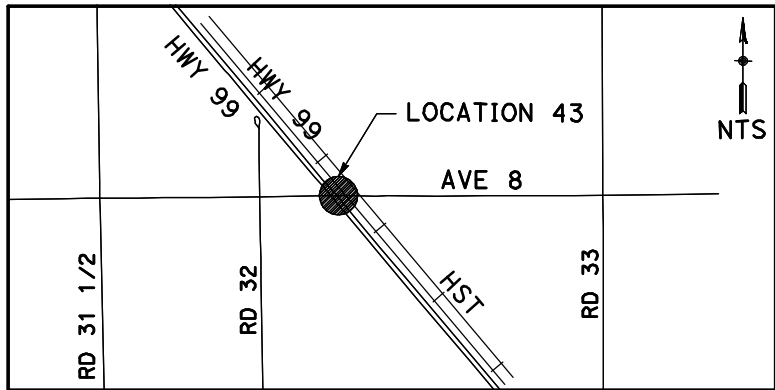
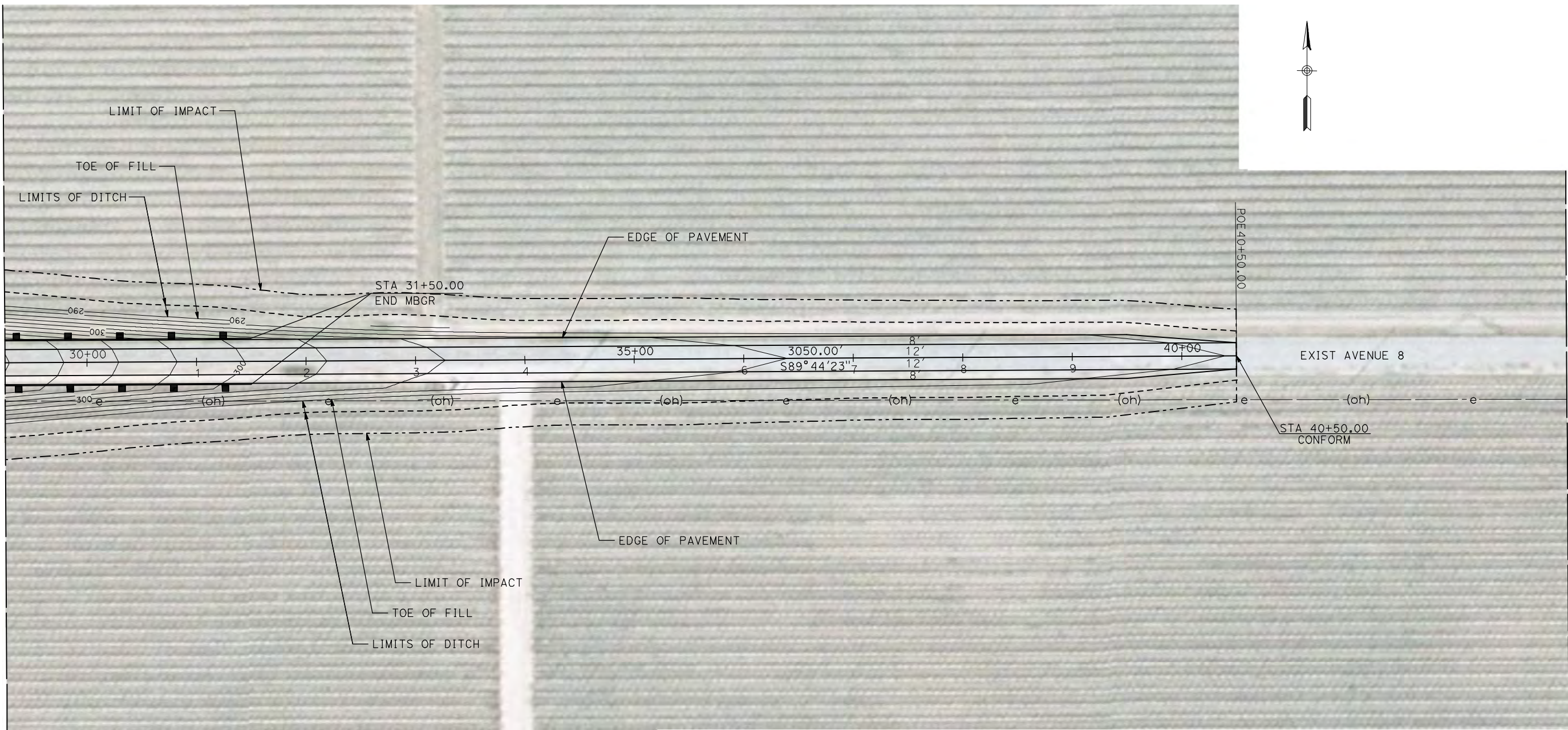
CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT2002-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



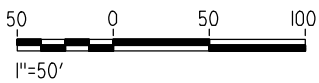
5/1/2011 1:50:47 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\Cost Reduction\Grade Sep Plan\WF-CT-2003-A.dgn

GibsonR1

MATCH LINE STA 29+25  
SEE DRAWING CT2002-A



**NOTE:**  
1. FOR ROADWAY PROFILE, SEE DRAWINGS CT3001-A THROUGH CT3003-A.



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

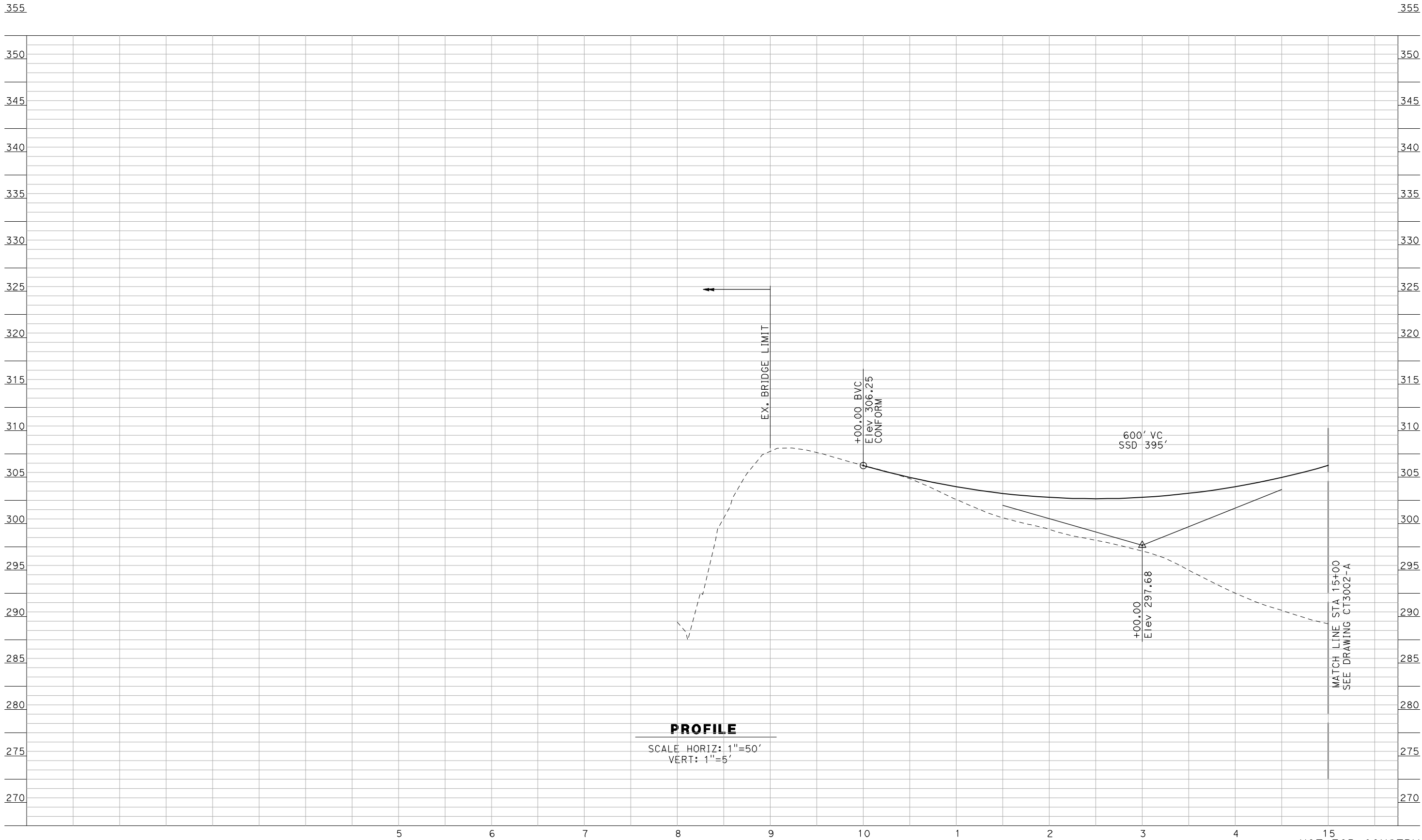
BNSF MAIN LINE - HYBRID  
GRADE SEPARATION - AVENUE 8  
LAYOUT  
SHEET 3 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT2003-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



5/1/2011 1:51:13 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-3001-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. GIBSON
DRAWN BY F. DEMARCO
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

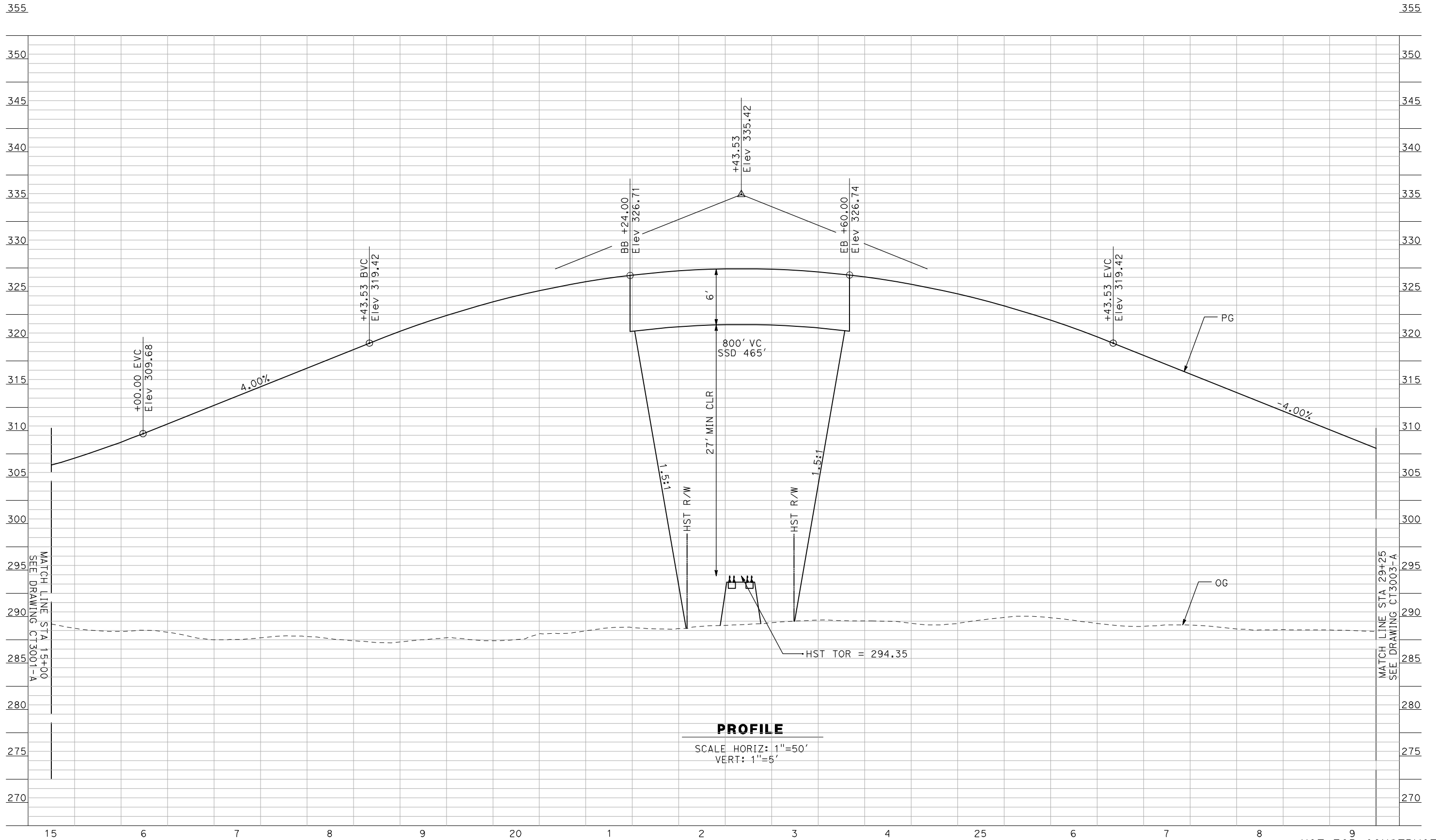


**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 8  
PROFILE  
SHEET 1 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3001-A
SCALE AS SHOWN
SHEET NO. OF ###

5/1/2011 1:51:17 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-3002-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2M HILL**



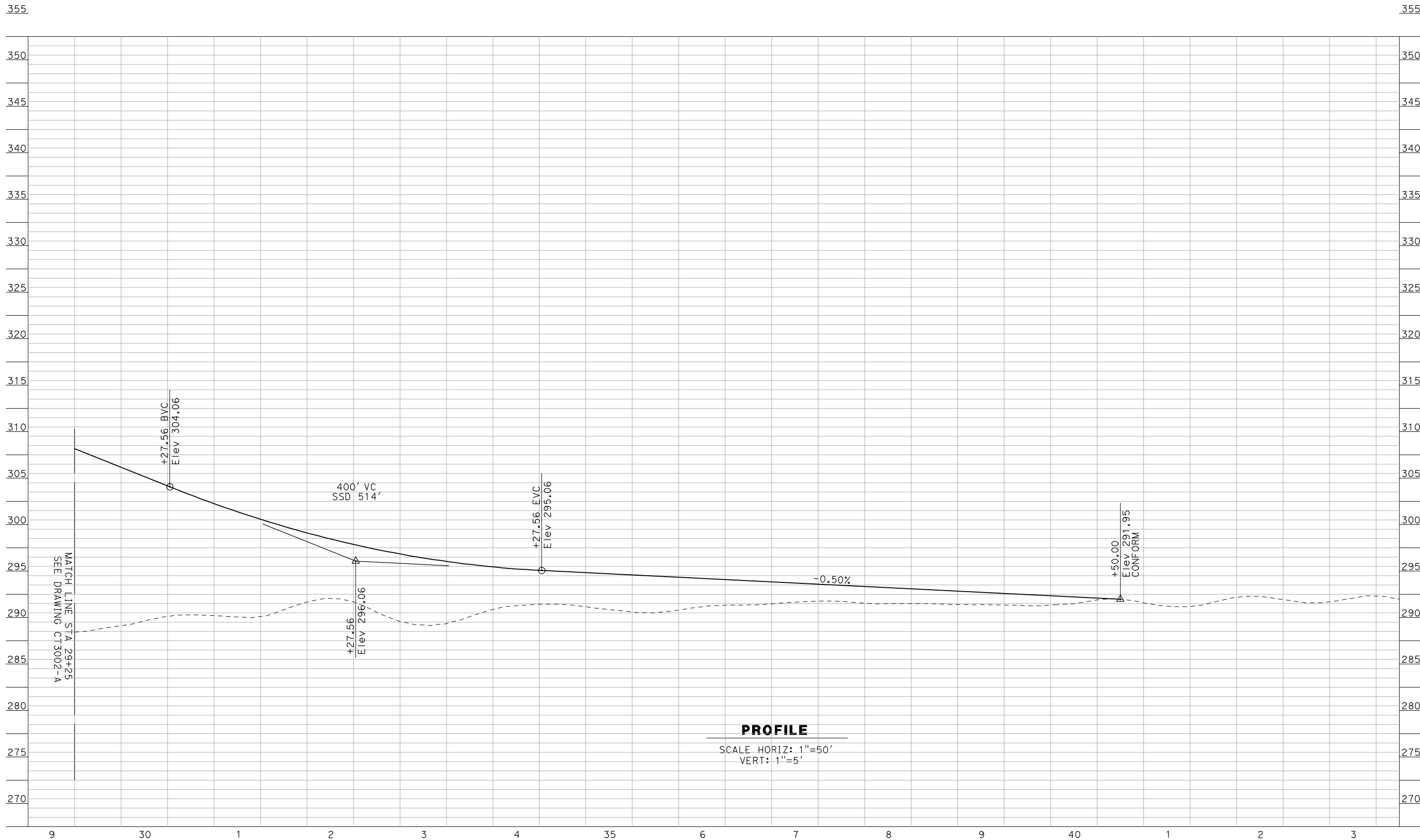
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 8  
PROFILE  
SHEET 2 OF 3

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
CT3002-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



5/1/2011 1:51:20 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\ROADWAY\Cost Reduction\Grade Sep Profile\WF-CT-3003-A.dgn

GibsonR1



NOT FOR CONSTRUCTION  
FOR INTERNAL USE ONLY

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
F. DEMARCO  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**






**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**  
BNSF MAINLINE - HYBRID  
GRADE SEPARATION - AVENUE 8  
PROFILE  
SHEET 3 OF 3

CONTRACT NO. HSR06-007
DRAWING NO. CT3003-A
SCALE AS SHOWN
SHEET NO. OF ###

[illegible]

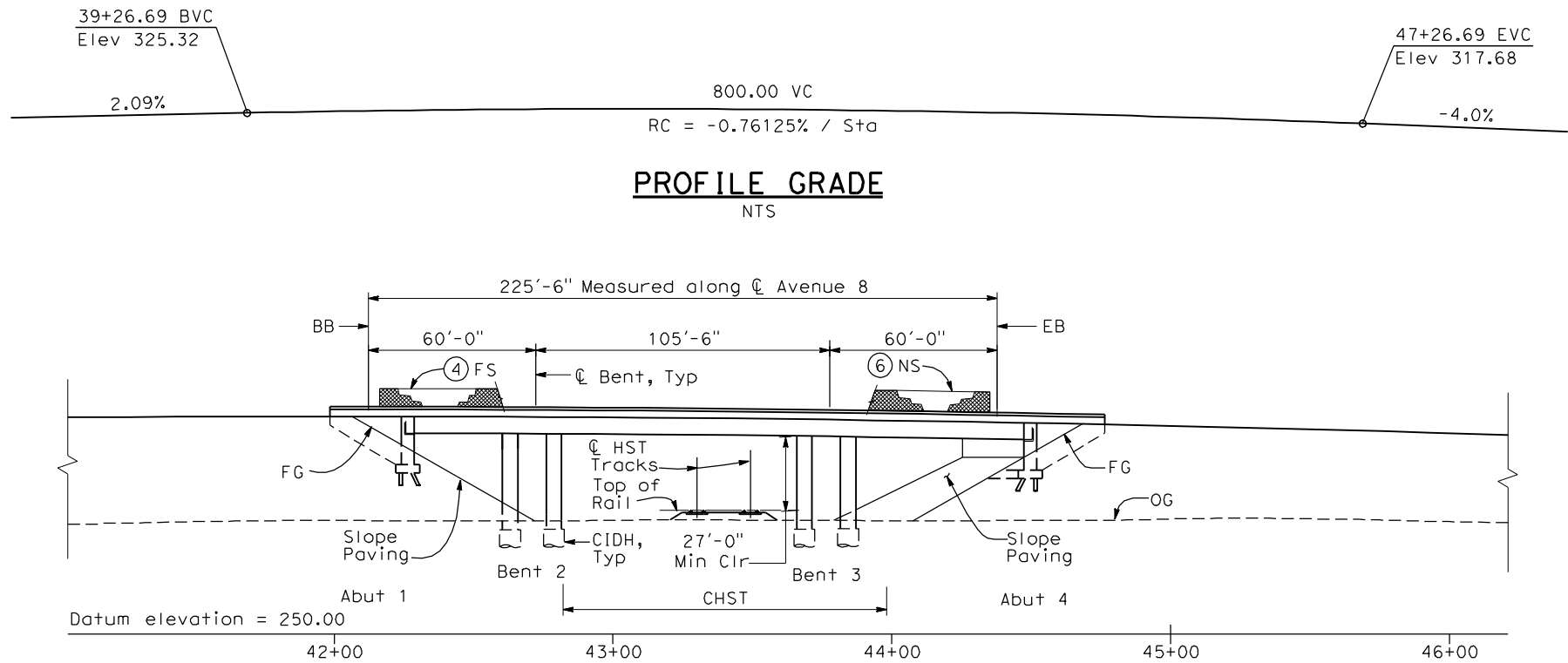
"Drawings lined Out are not  
Included for Procurement Purposes Only"

						DESIGNED BY H. Lee	<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>  <b>NOT FOR</b> <b>CONSTRUCTION</b>	 Technical Services, Inc. 2020 L Street, Suite 300 Sacramento, CA 95811  	 <b>CALIFORNIA</b> HIGH-SPEED RAIL AUTHORITY	<b>CALIFORNIA HIGH-SPEED TRAIN PROJECT</b> <b>MERCED TO FRESNO</b> HYBRID ALTERNATIVE AVENUE 24 INDEX OF DRAWINGS SHEET 1 OF 1	CONTRACT NO. HSR06-007
					DRAWN BY E. CISNEROS	DRAWING NO. SB1311					
					CHECKED BY J. RENTERIA	SCALE No scale					
					IN CHARGE A. Boone	SHEET NO. OF					
					DATE 04/29/2011						
REV	DATE	BY	CHK	APP	DESCRIPTION						

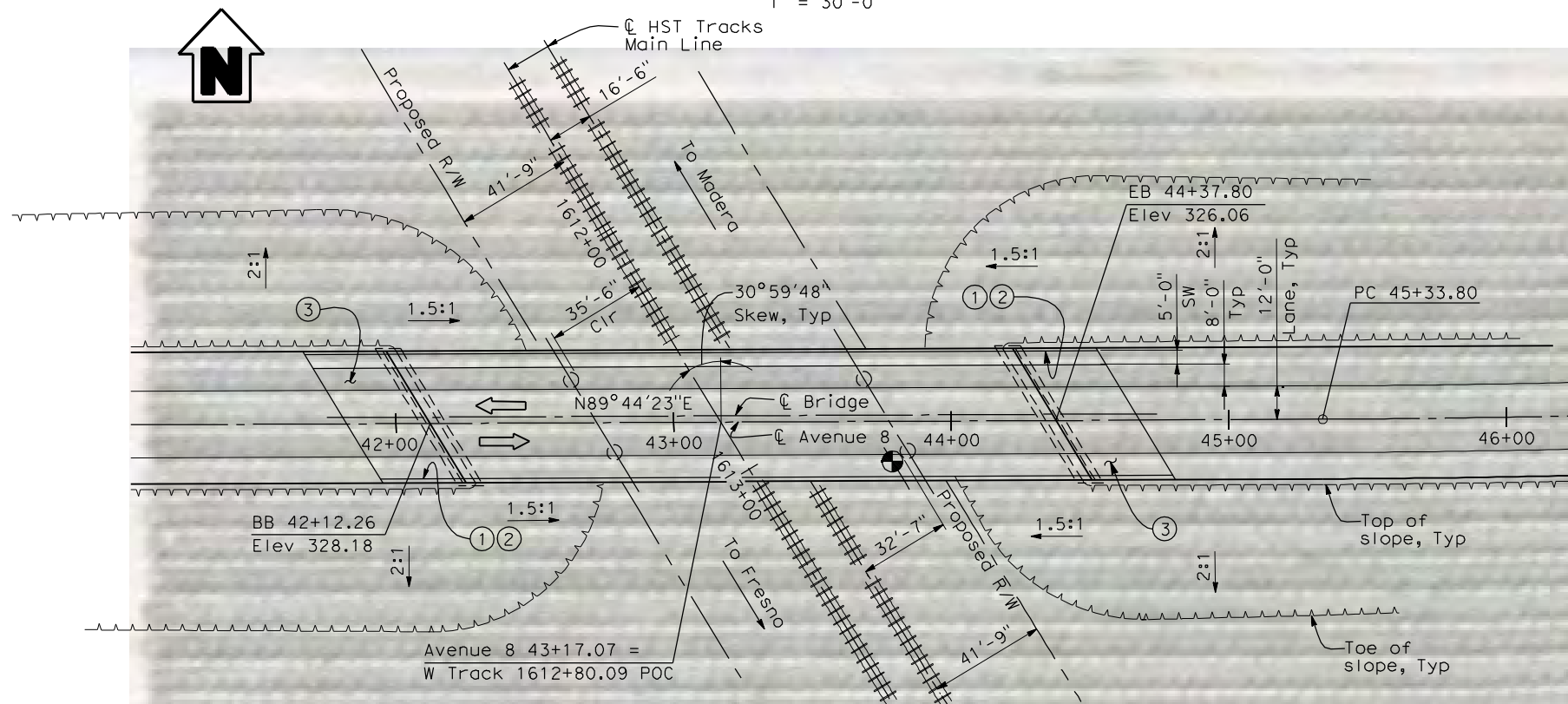




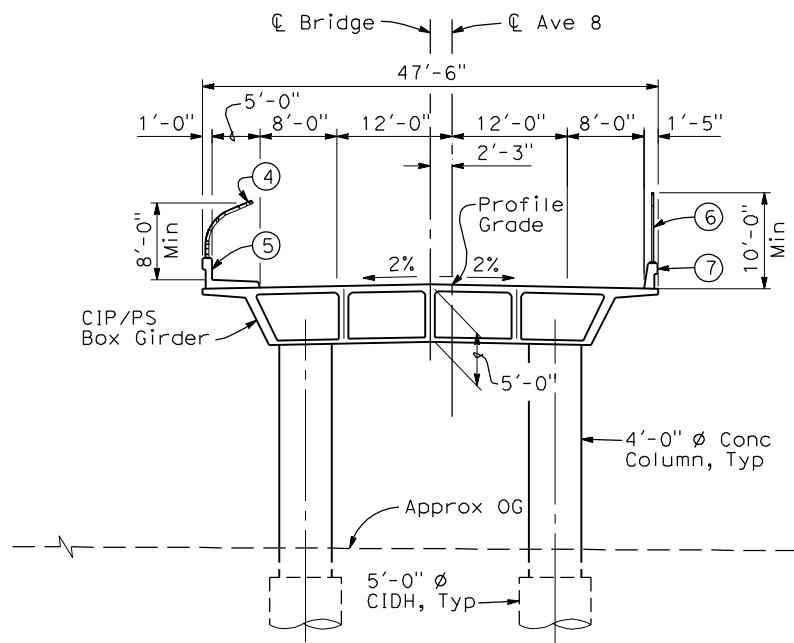
c:\hsr\60022962\Task-02\_Merced-Fresno\CADD\Structure\Sheet\APS\A1\15%\_cost\_reduction\_submittal\GradeStructure\A1-21ML2.W-ML-ST-OH\_Ave\_8.dgn 4/30/2011 4:56:36 PM



**ELEVATION**  
1" = 30'-0"



**PLAN**  
1" = 30'-0"



**TYPICAL SECTION**  
1"=10'-0"

**NOTES:**

- ① Paint "Bridge No. XX-XX"
- ② Paint "Avenue 8 OH"
- ③ Structure Approach Slab Type N (30S)
- ④ Chain Link Railing Type 3
- ⑤ Concrete Barrier Type 26 (Mod)
- ⑥ Chain Link Railing Type 7 (Mod)
- ⑦ Concrete Barrier Type 732
- 8 Bearing of Avenue 8 to be determined.
- 9 Existing underground and overhead utilities to be determined.

**LEGEND:**

- ← Direction of traffic
- Point of minimum vertical clearance

DATE OF ESTIMATE	
BRIDGE REMOVAL	=
STRUCTURE DEPTH	= 5'-0"
LENGTH	= 225'-6"
WIDTH	= 47'-6"
AREA	= 10,713 ft <sup>2</sup>
COST/ $\square$ FT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	=
TOTAL COST	=

**LOCATION 43**



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY H. LEE
DRAWN BY E. CISNEROS
CHECKED BY J. RENTERIA
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET**  
15% DESIGN  
SUBMITTAL

**NOT FOR  
CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE  
AVENUE 21  
AVENUE 8 OVERHEAD  
PLANNING STUDY

CONTRACT NO. HSR06-007
DRAWING NO. ST1000
SCALE As shown
SHEET NO. OF



# CALIFORNIA HIGH-SPEED TRAIN

## Roadway Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
Merced to Fresno Section

Volume 3: Local Road Relocations  
HYBRID Alternative

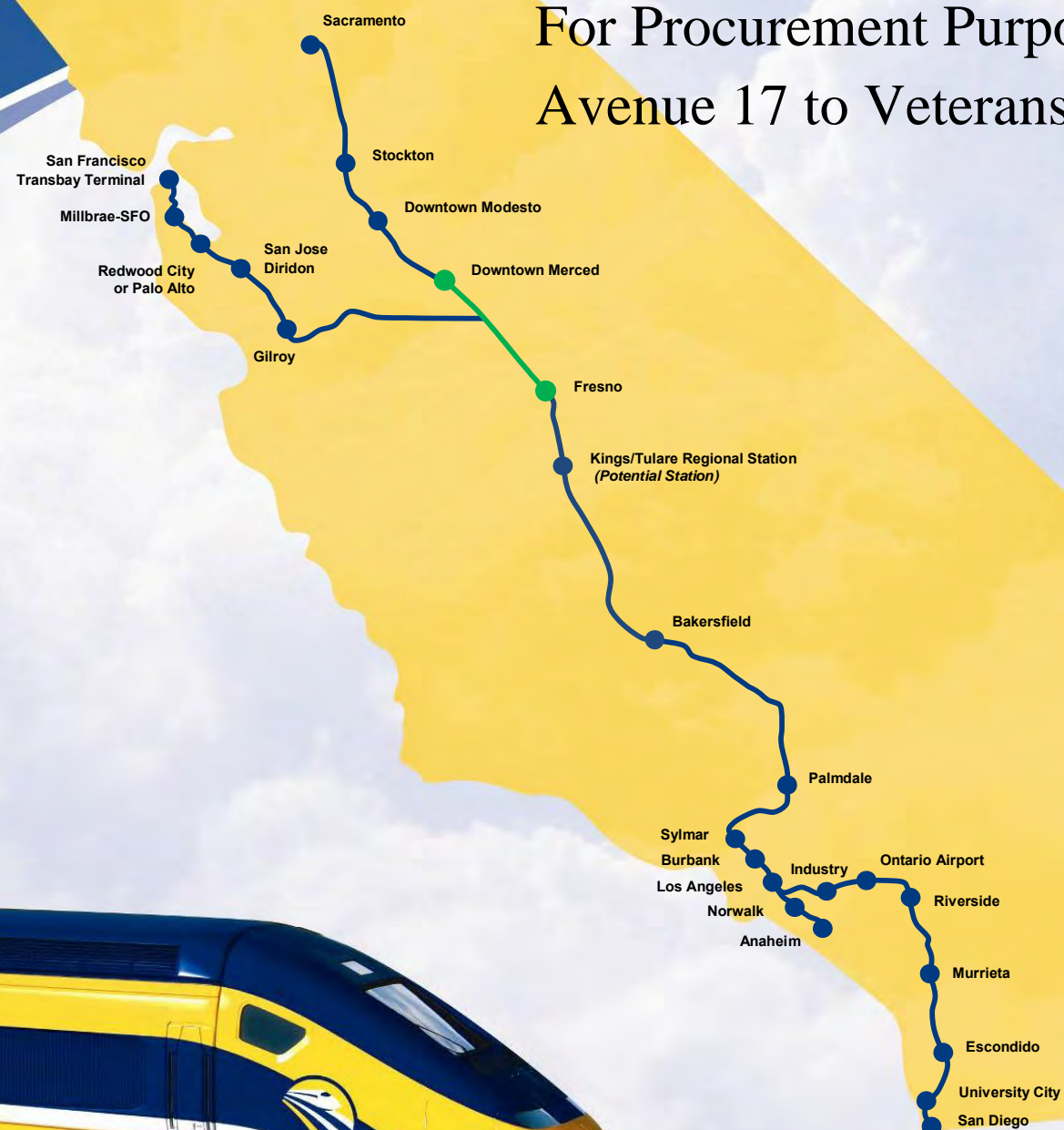
May 2011



**CALIFORNIA**  
High-Speed Rail Authority



**U.S. Department of Transportation**  
Federal Railroad Administration





LOCATION NO.	SHT NO.	DWG NO.	DRAWING TITLE LINE 3	DRAWING TITLE LINE 4	DRAWING TITLE LINE 5	DRAWING TITLE LINE 6
GENERAL						
		B9190-B	HYBRID	GENERAL	INDEX OF DRAWINGS	SHEET 1 OF 1
		B9191-B	HYBRID	GENERAL	ABBREVIATIONS, SYMBOLS AND NOTES	SHEET 1 OF 1
		B9200-B	HYBRID		INDEX MAP	SHEET 1 OF 2
		B9201-B	HYBRID		INDEX MAP	SHEET 2 OF 2
		<del>CB9200-B</del>	<del>BNSF MAINLINE/WYE/MERCED DO - (HYBRID)</del>	<del>LOCAL &amp; FRONTAGE RD</del>	<del>KEY MAP</del>	<del>SHEET 1 OF 2</del>
		<del>CB9201-B</del>	<del>UPRR/SR99 WYE/MERCED DO - (HYBRID)</del>	<del>LOCAL &amp; FRONTAGE RD</del>	<del>KEY MAP</del>	<del>SHEET 2 OF 2</del>
		CR9190-B	HYBRID	LOCAL ROADS	TYPICAL CROSS SECTIONS	SHEET 1 OF 2
		<del>CR9191-B</del>	<del>HYBRID</del>	<del>LOCAL ROADS</del>	<del>TYPICAL CROSS SECTIONS</del>	<del>SHEET 2 OF 2</del>
		CR9192-B	HYBRID		GENERAL STAGE CONSTRUCTION AND TRAFFIC PLAN	SHEET 1 OF 1
LAYOUT						
46		CR4000-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 30 1/2	LAYOUT	SHEET 1 OF 1
47		CR4001-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 29	LAYOUT	SHEET 1 OF 1
<del>57</del>		<del>CR4012-A</del>	<del>BNSF MAIN LINE - (HYBRID)</del>	<del>LOCAL ROAD - HANOVER</del>	<del>LAYOUT</del>	<del>SHEET 1 OF 1</del>
67		CR4018-A	BNSF MAIN LINE - (HYBRID)	LOCAL ROAD - ROAD 33	LAYOUT	SHEET 1 OF 1
<del>75</del>		<del>CR9200-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>75</del>		<del>CR9201-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>76</del>		<del>CR9202-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>76</del>		<del>CR9203-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>66</del>		<del>CR9204-B</del>	<del>UPRR/SR99 MERCED - (HYBRID)</del>	<del>PROPOSED WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>66</del>		<del>CR9205-B</del>	<del>UPRR/SR99 MERCED - (HYBRID)</del>	<del>PROPOSED WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>66</del>		<del>CR9206-B</del>	<del>UPRR/SR99 MERCED - (HYBRID)</del>	<del>PROPOSED WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>66</del>		<del>CR9207-B</del>	<del>UPRR/SR99 MERCED - (HYBRID)</del>	<del>PROPOSED WEST FRONTAGE ROAD</del>	<del>LAYOUT</del>	
<del>77</del>		<del>CR9208-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - ROAD 11</del>	<del>LAYOUT</del>	
<del>77</del>		<del>CR9209-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - ROAD 11</del>	<del>LAYOUT</del>	
<del>76</del>		<del>CR9210-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - SANDY MUSH ROAD</del>	<del>LAYOUT</del>	<del>STA 30+00 TO STA 33+00</del>
<del>77</del>		<del>CR9211-B</del>	<del>UPRR/SR99 MERCED DO - (HYBRID)</del>	<del>LOCAL ROAD - CROSS ROAD</del>	<del>LAYOUT</del>	<del>STA 120+00 TO STA 140+00</del>
80		CR9212-B	UPRR/SR99 MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 1/2	LAYOUT	
80		CR9213-B	UPRR/SR99 WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 1/2	LAYOUT	
81		CR9214-B	UPRR/SR99 MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - ROAD 12	LAYOUT	<del>STA 50+00 TO 95+58.26 &amp; STA 71+00 TO 81+00</del>
82		CR9215-B	UPRR/SR99 MERCED DO - (HYBRID)	LOCAL ROAD - ROAD 12 1/2 & AVENUE 24 3/4	LAYOUT	<del>STA 81+00 TO STA 96+00</del>
82		CR9216-B	UPRR/SR99 MERCED/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24 3/4	LAYOUT	<del>STA 96+00 TO STA 109+18.38</del>
<del>78</del>		<del>CR9217-B</del>	<del>BNSF MAINLINE /WYE DO - (HYBRID)</del>	<del>LOCAL ROAD - AVENUE 24</del>	<del>LAYOUT</del>	<del>STA 75+00 TO STA 100+00</del>
78		CR9218-B	BNSF MAINLINE/WYE DO - (HYBRID)	LOCAL ROAD - AVENUE 24	LAYOUT	<del>STA 100+00 TO STA 116+86.44</del>
85		CR9219-B	UPRR/SR99 MERCED - (HYBRID)	HEALY ROAD	LAYOUT	
86		CR9220-B	UPRR/SR99 MERCED - (HYBRID)	GERARD AVENUE/CALTRANS FRONTAGE ROAD	LAYOUT	

"Drawings lined Out are not Included for Procurement Purposes Only"

						DESIGNED BY D. AYELE	RECORD SET 15% DESIGN SUBMITTAL  NOT FOR CONSTRUCTION	<div><div><div>AECOM</div><div>Technical Services, Inc.</div><div>2020 L Street, Suite 300 Sacramento, CA 95811</div></div><div><div>CH2MHILL</div></div></div>	<div><div><div><div></div></div><div></div></div><div><div>CALIFORNIA</div><div>HIGH-SPEED RAIL AUTHORITY</div></div></div>	CALIFORNIA HIGH-SPEED TRAIN PROJECT MERCED TO FRESNO		CONTRACT NO. HSR06-007
						DRAWN BY C. DELOS REYES				DRAWING NO. B9190-B		
						CHECKED BY A. SILVER				SCALE NONE		
						IN CHARGE A. BOONE				SHEET NO. ### OF ###		
REV	DATE	BY	CHK	APP	DESCRIPTION	DATE 04/29/2011				HYBRID GENERAL INDEX OF DRAWINGS SHEET 1 OF 1		



4/27/2011 7:24:34 PM P:\60022962\Task 02\_Merced-Fresno\cadd\Civil\Sheet\Package 3 - Hybrid\Volume 3B - Hybrid\Local Roads\Abbreviation\B9191-B.dgn  
ReyesC1

ABBREVIATIONS

ALIGNMENT

HORIZONTAL	
BC	BEGINNING OF CURVE
EC	END OF CURVE
PC	POINT OF CURVE
PCC	POINT OF COMPOUNT CURVES
PI	POINT OF INTERSECTION OF TWO TANGENTS
POB	POINT OF BEGINNING
POC	POINT ON CURVE
POE	POINT OF ENDING
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVES
PT	POINT OF TANGENCY
R	RADIUS OF CURVATURE IN FEET
V, DS	DESIGN VELOCITY IN MILES PER HOUR
VERTICAL	
BVC	BEGIN OF VERTICAL CURVE
EVC	END OF VERTICAL CURVE
PVC	POINT OF VERTICAL CURVE (BEGINNING OF CURVE)
PVI	POINT OF VERTICAL INTERSECTION (OF TANGENTS)
PVT	POINT OF VERTICAL TANGENCY (ENDING OF CURVE)
VC	VERTICAL CURVE

MISCELLANEOUS

ALT	ALTERNATIVE
AVE	AVENUE
BB	BEGIN BRIDGE
BEG	BEGIN
BLVD	BOULEVARD
CL	CENTER LINE
CLR	CENTERLINE, CLASS
CLEAR	CLEAR
COL	COLUMN
DWG	DRAWING
EB	END BRIDGE
ELEV	ELEVATION
EQ	EQUATION
ES	EDGE OF SIDEWALK
ETW	EDGE OF TRAVELED WAY
EXIST(E)	EXISTING
FL	FLOW LINE
HORIZ	HORIZONTAL
HP	HINGE POINT
HST	HIGH SPEED TRAIN
HWY	HIGHWAY
IC	INTERCHANGE
IN	INCH
L	LENGTH
LT	LEFT
MBGR	METAL BEAM GUARD RAIL
ML	MAINLINE
MPH	MILES PER HOUR
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH
NB	NORTH BOUND
No, NO	NUMBER
NTS	NOT TO SCALE
OG	ORIGINAL GROUND
O/H OH	OVERHEAD
PG&E	PACIFIC GAS & ELECTRIC
PGL, FG	PROFILE GRADE LINE
RET	RETAINING
RR	RAILROAD
RD	ROAD
R/W	RIGHT OF WAY
RT	RIGHT
SB	SOUTH BOUND
SHLD	SHOULDER
SR	STATE ROUTE
SHT	SHEET
SS	SANITARY SEWER
SSD	STOPPING SIGHT DISTANCE
ST	STREET
STA	STATION
STD	STANDARD
SD	STORM DRAIN
STRUCT, STR	STRUCTURE
T	TANGENT
TEL	TELEPHONE
	(OH) OVERHEAD LINE
	(UG) UNDERGROUND LINE

SYMBOLS

	MATCH LINE
	HST TRACK
	PROPOSED HST RIGHT-OF-WAY
	FREIGHT/PASSENGER TRACK - EXISTING
	EXISTING RIGHT-OF-WAY OR EXISTING BRIDGE FEATURES
	RETAINING WALLS
	ORIGINAL GROUND
	GAS LINE (16")
	COMMUNICATION LINE
	WATER LINE
	FIBER OPTIC LINE
	ELECTRICAL LINE
	ELECTRICAL TOWER
	SEWER LINE
	STORM DRAIN LINE
	FUEL LINE
	TELEPHONE LINE
	PETROLEUM LINE (12")
	OVERHEAD
	NORTH ARROW
	PVI
	MBGR
	DIRECTION OF TRAVEL
	PROPOSED CONTOUR

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY R. LI
DRAWN BY A. TRINH
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL  
  
NOT FOR  
CONSTRUCTION

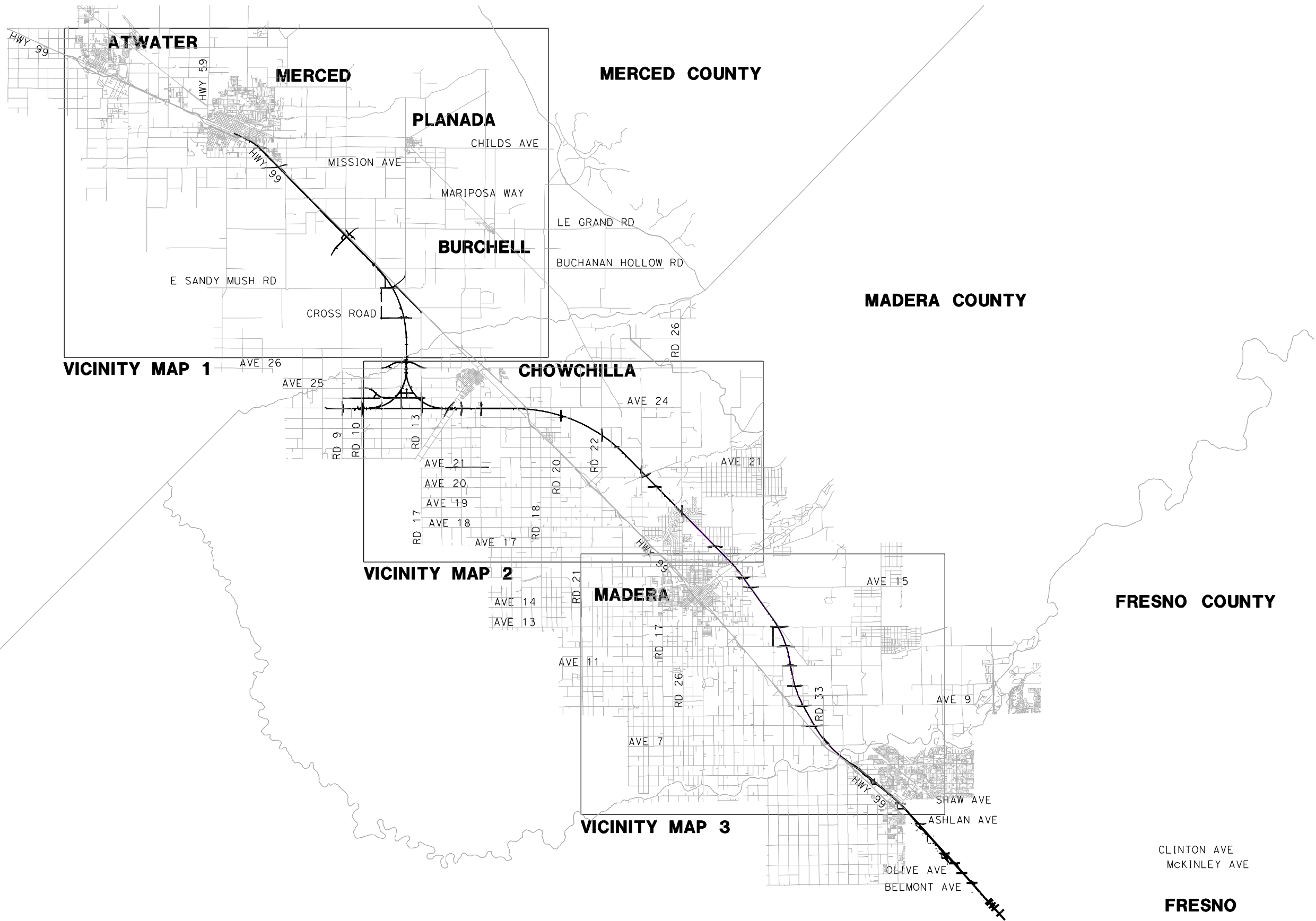


CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID  
GENERAL  
ABBREVIATIONS, SYMBOLS AND NOTES  
SHEET 1 OF 1

CONTRACT NO. HSR06-007
DRAWING NO. B9191-B
SCALE NO SCALE
SHEET NO. ### OF ###

2/16/2012 12:00:35 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1\Rev 1 - 15% Plans\CADD\Sheet\HYBRID\A1 HYBRID\B9200-B\_REV2.dgn  
GibsonR1



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
D. AYELE  
DRAWN BY  
A. TRINH  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION



CALIFORNIA  
HIGH-SPEED RAIL AUTHORITY

CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO  
HYBRID

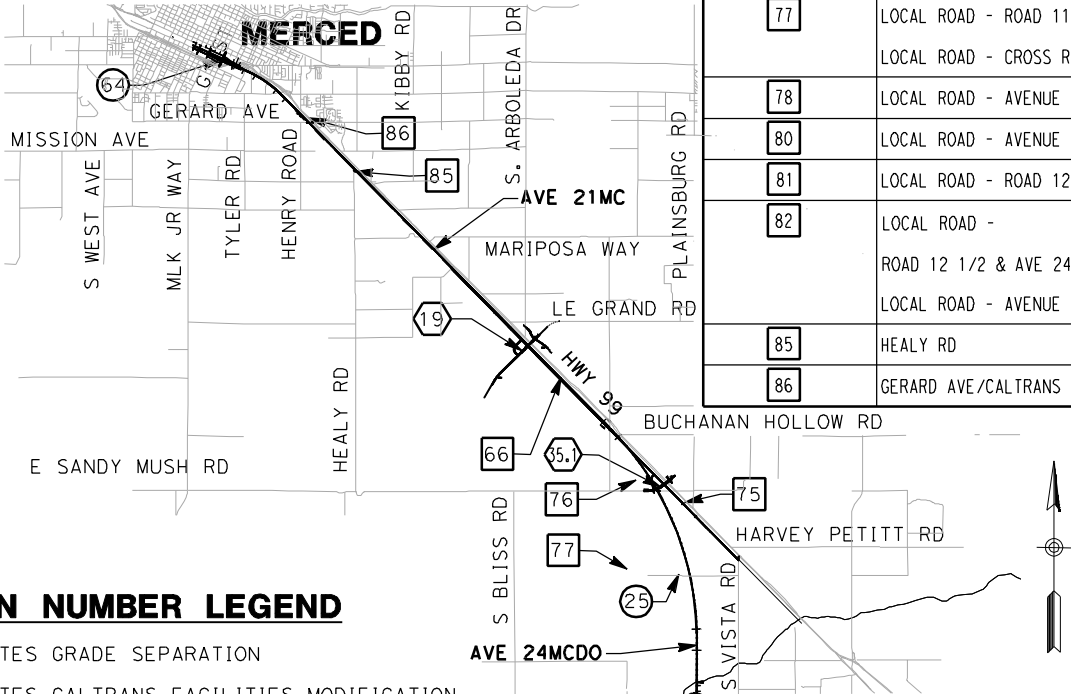
INDEX MAP  
SHEET 1 OF 2

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
B9200-B  
SCALE  
NO SCALE  
SHEET NO.  
### OF ###



2/16/2012 12:01:15 PM I:\CHSR\60022962\Task-03\_Merced-Fresno\CADD\Civil\Design\gibsonr1 - 15% Plans\CADD\Sheet\PLANS\HYBRID\A1 HYBRID\B9201-B\_REV2.dgn GibsonR1

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
1	GRADE SEPARATION - AVENUE 9	CT0001-A - CT0003-A	ST1001
2	GRADE SEPARATION - AVENUE 10	CT0004-A - CT0006-A	ST1002
3	GRADE SEPARATION - AVENUE 11	CT0007-A - CT0009-A	ST1003
4	GRADE SEPARATION - AVENUE 12	CT0010-A - CT0012-A	ST1004
5	GRADE SEPARATION - AVENUE 13	CT0013-A - CT0016-A	ST1005
6	GRADE SEPARATION - AVENUE 15	CT0017-A - CT0019-A	ST1006
7	GRADE SEPARATION - AVENUE 15 1/2	CT0020-A - CT0022-A	ST1007
9	GRADE SEPARATION - AVENUE 17	CT0026-A - CT0028-A	ST1009
10	GRADE SEPARATION - ROAD 27	CT0029-A - CT0031-A	
11	GRADE SEPARATION - ROAD 26	CT0032-A - CT0034-A	
19	GRADE SEPARATION - LE GRAND INTERCHANGE	CT7208-B - CT7214-B	ST1114
25	GRADE SEPARATION - CROSS ROAD	CT5238-B - CT5240-B	ST1136
26	GRADE SEPARATION - AVENUE 26 ALT 1 UNDERPASS - AVENUE 26 ALT 2	CT5227-B - CT5236-B CT5246-B - CT5248-B	ST1135
27	GRADE SEPARATION - AVENUE 25	CT5210-B - CT5221-B	ST1133 - ST1134
32	GRADE SEPARATION - AVENUE 20	CT0113-A - CT0115-A	ST1035
33	GRADE SEPARATION - AVENUE 20 1/2	CT0116-A - CT0118-A	ST1036 - ST1037
34	GRADE SEPARATION - ROAD 24	CT0119-A - CT0121-A	ST1038 - ST1039
35	GRADE SEPARATION - ROAD 22	CT0122-A - CT0124-A	ST1040
35.1	SANDY MUSH RD INTERCHANGE	CT7204-B - CT7207-B	ST1142
36.1	GRADE SEPARATION - ROAD 22	CT0125.1-A - CT0127.1-A	ST1041

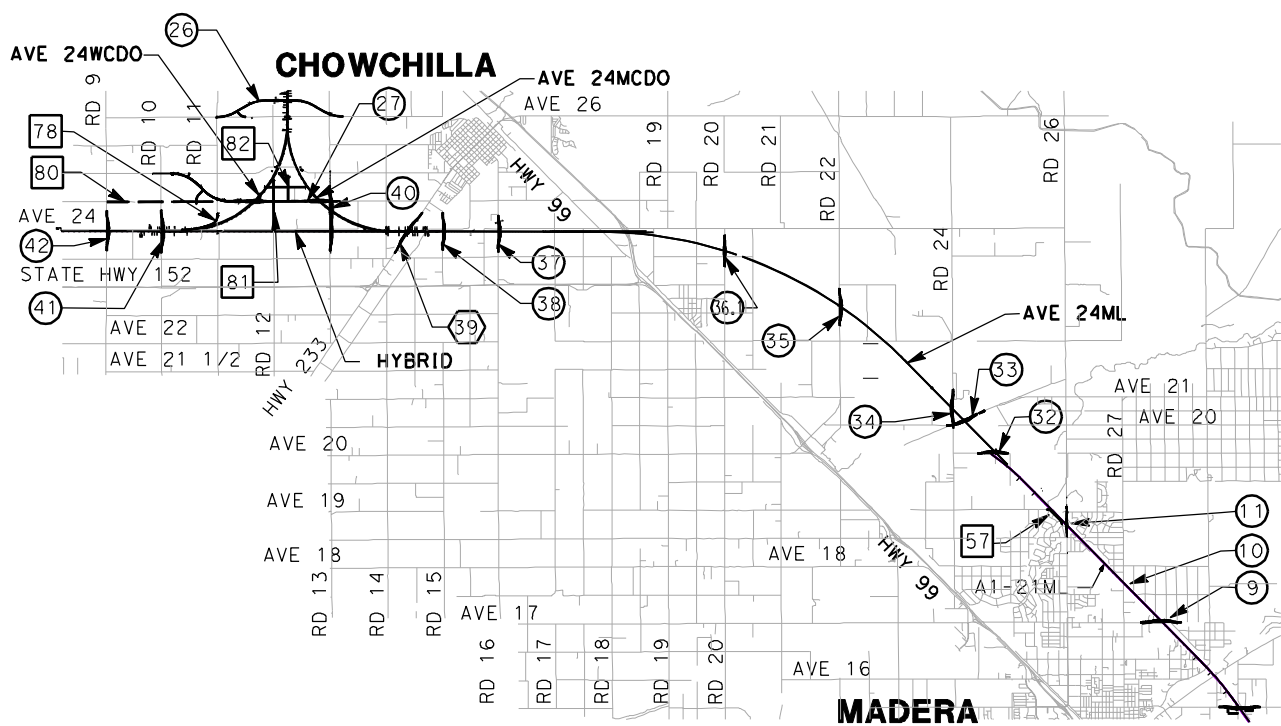


#### LOCATION NUMBER LEGEND

- (X) - INDICATES GRADE SEPARATION
- (X) - INDICATES CALTRANS FACILITIES MODIFICATION
- (X) - INDICATES LOCAL ROAD RELOCATION

VICINITY MAP 1

LOCATION NO.	SHEET TITLE	ROADWAY DWG NO.	STR DWG NO.
37	GRADE SEPARATION - ROAD 16	CT0128-A - CT0130-A	ST1042
38	GRADE SEPARATION - ROAD 15	CT0131-A - CT0133-A	ST1043
39	GRADE SEPARATION - ROBERTSON BLVD (SR233) ALT 1 UNDERPASS - ROBERTSON BLVD (SR233) ALT 2	CT7200-B - CT7203-B CT7215-B - CT7217-B	ST1150
40	GRADE SEPARATION - ROAD 13	CT5203-B - CT5207-B	ST1121 & ST1139
41	GRADE SEPARATION - ROAD 10 ALT 1 GRADE SEPARATION - ROAD 10 ALONG EXIST ALT 2	CT5200-B - CT5202-B CT5249-B - CT5251-B	ST1160
42	GRADE SEPARATION - ROAD 9	CT0143-A - CT0145-A	ST1120
64	GRADE SEPARATION - G STREET	CT0149-A	ST1180
65	GRADE SEPARATION - AVENUE 7	CT0146-A - CT0148-A	
43	CALTRANS - AVENUE 8	CT2000-A - CT2002-A	ST1000
46	LOCAL ROAD - ROAD 30 1/2	CR4000-A	
47	LOCAL ROAD - ROAD 29	CR4001-A	
57	LOCAL ROAD - HANOVER DR	CR4012-A	
66	PROPOSED WEST FRONTAGE ROAD	CR9204-B - CR9207-B	
67	LOCAL ROAD - ROAD 33	CR4018-A	
75	LOCAL ROAD - WEST FRONTAGE ROAD	CR9200-B - CR9201-B	
76	LOCAL ROAD - SANDY MUSH ROAD LOCAL ROAD - WEST FRONTAGE ROAD	CR9210-B CR9202-B - CR9203-B	
77	LOCAL ROAD - ROAD 11 LOCAL ROAD - CROSS ROAD	CR9208-B - CR9209-B CR9211-B	
78	LOCAL ROAD - AVENUE 24	CR9217-B - CR9218-B	
80	LOCAL ROAD - AVENUE 24 1/2	CR9212-B - CR9213-B	
81	LOCAL ROAD - ROAD 12	CR9214-B	
82	LOCAL ROAD - ROAD 12 1/2 & AVE 24 3/4 LOCAL ROAD - AVENUE 24 3/4	CR9215-B CR9216-B	
85	HEALY RD	CR9219-B	
86	GERARD AVE/CALTRANS FRONTAGE RD	CR9220-B	



4/27/2011 7:32:35 PM p:\60022962\task 02\_merced-fresno\cadd\civil\sheet\package 3 - hybrid\volume 3b - hybrid\local roads\Typical Section\CR9190-B.dgn

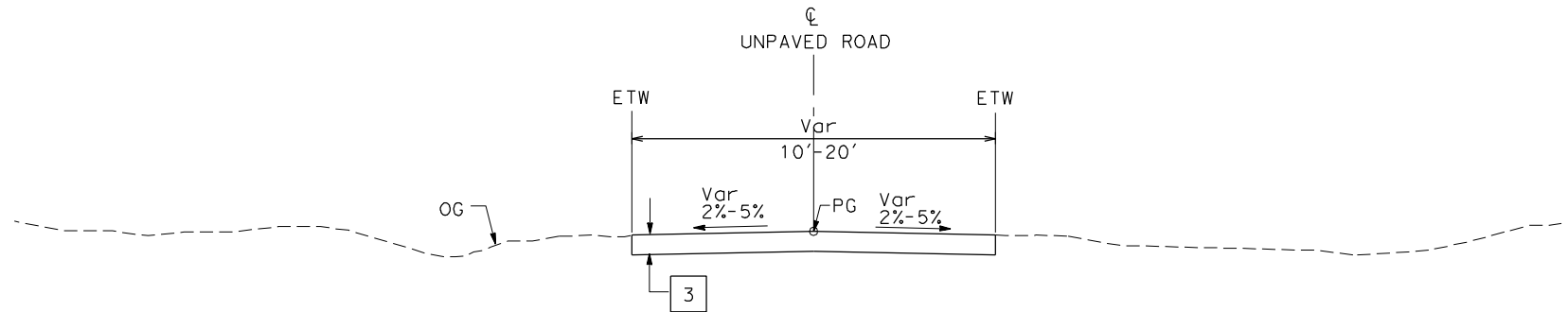
ReyesC1

STRUCTURAL SECTIONS:

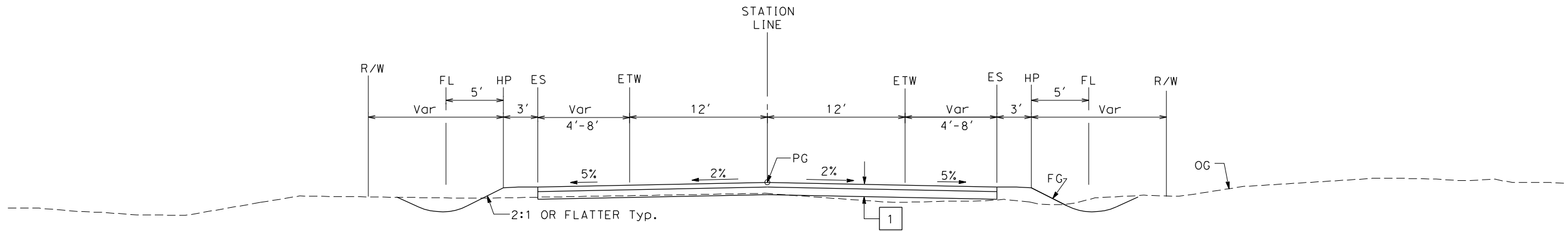
- 1

HMA TYPE A  
AB CLASS 2
- 3

AB CLASS 2



**UNPAVED ROAD (TYP)**  
SEE LAYOUT SHEETS  
FOR ACTUAL ROADWAY WIDTHS



**2-LANE FRONTAGE ROAD**  
SEE LAYOUT SHEETS  
FOR ACTUAL SHOULDER WIDTHS

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY K. OAKS
DRAWN BY K. OAKS
CHECKED BY A. SILVER
IN CHARGE A. BOONE
DATE 04/29/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

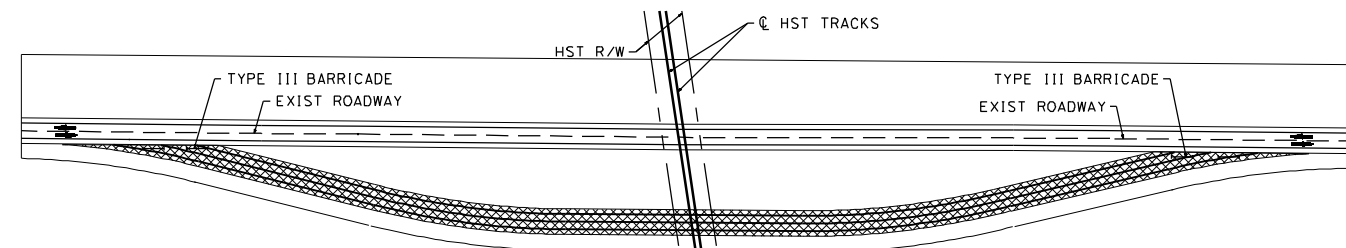
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

HYBRID  
LOCAL ROADS  
TYPICAL CROSS SECTIONS  
SHEET 1 OF 2

CONTRACT NO. HSR06-007
DRAWING NO. CR9190-B
SCALE NTS
SHEET NO. ### OF ###

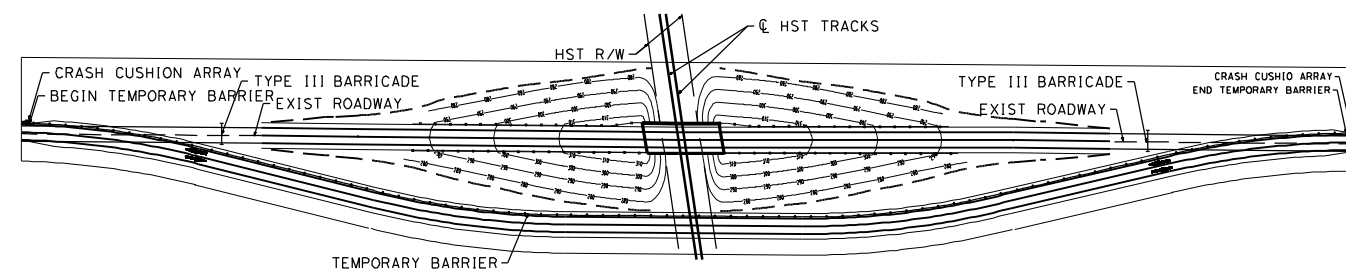


STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN  
CENTERED PROPOSED ALIGNMENT



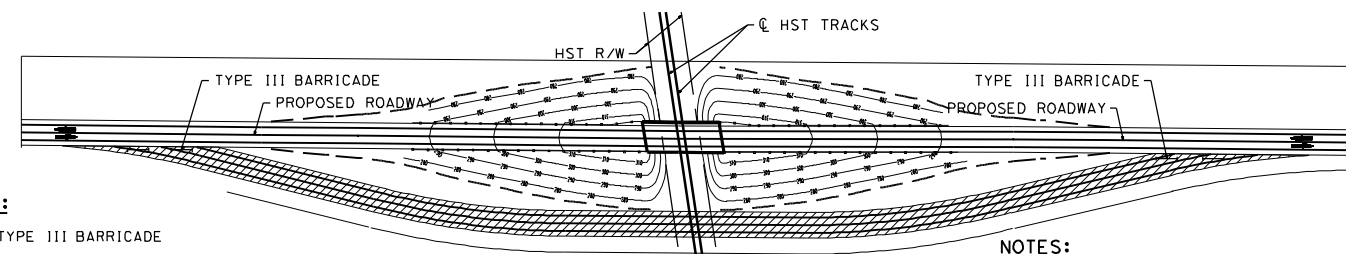
STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT TEMPORARY DETOUR ROAD



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO TEMPORARY DETOUR ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY

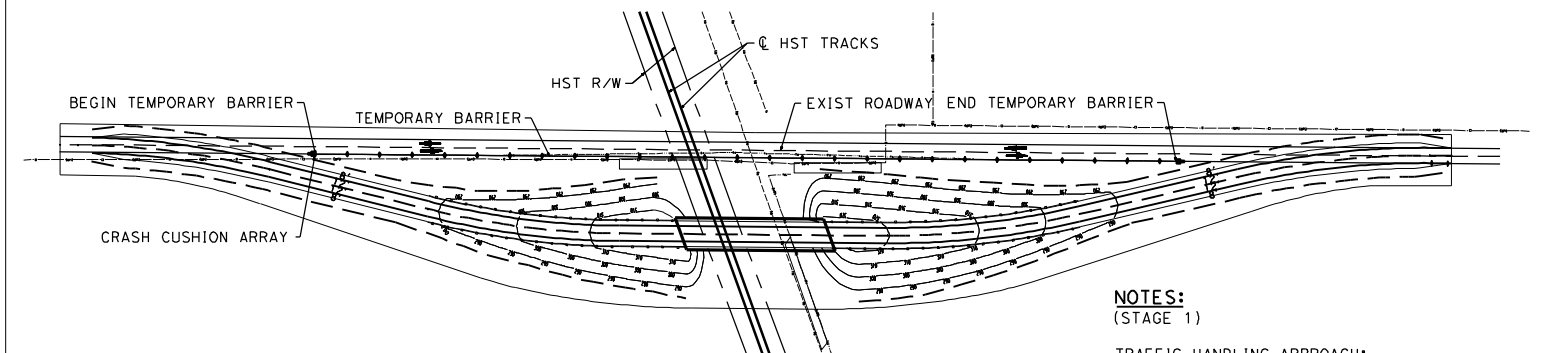


STAGE CONSTRUCTION (STAGE 3)

NOTES:  
(STAGE 3)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- REMOVE TEMPORARY DETOUR ROAD

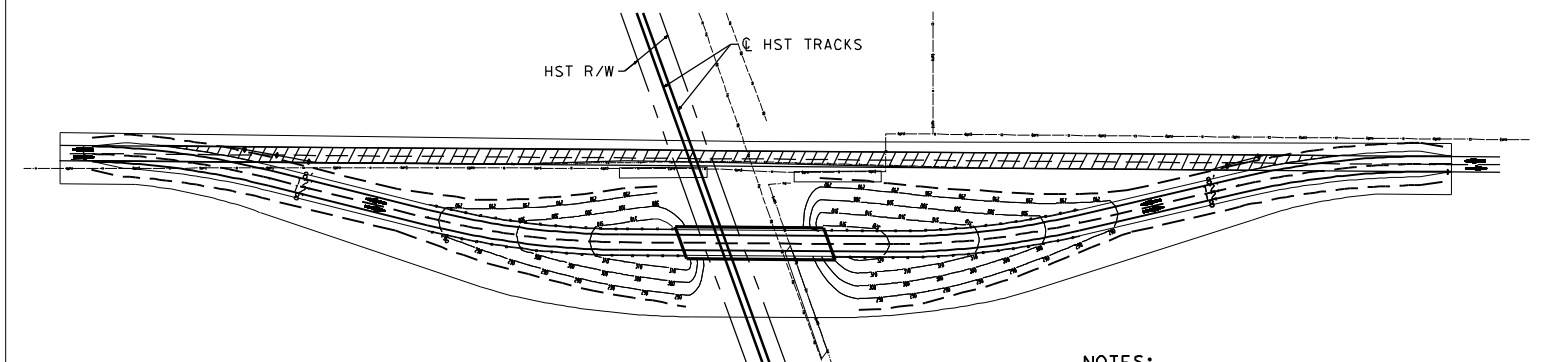
- LEGEND:
- TYPE III BARRICADE
  - CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - CONSTRUCT TEMPORARY ROAD
  - REMOVE TEMPORARY ROAD

STAGE CONSTRUCTION / TRAFFIC CONTROL PLAN  
SHIFTED PROPOSED ALIGNMENT



STAGE CONSTRUCTION (STAGE 1)

NOTES:  
(STAGE 1)  
TRAFFIC HANDLING APPROACH:  
- TRAFFIC TO REMAIN ON EXISTING ROAD  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT NEW GRADE SEPARATION EMBANKMENT  
- CONSTRUCT NEW GRADE SEPARATION STRUCTURE  
- CONSTRUCT DRAINAGE FACILITY



STAGE CONSTRUCTION (STAGE 2)

NOTES:  
(STAGE 2)  
TRAFFIC HANDLING APPROACH:  
- SHIFT TRAFFIC TO NEW GRADE SEPARATION FACILITY  
STAGE CONSTRUCTION ACTIVITIES:  
- CONSTRUCT REALIGNED ROAD CONFORMS  
- COMPLETE DRAINAGE FACILITIES  
- REMOVE BASE AND SURFACING OF EXIST ROAD

- LEGEND:
- CRASH CUSHION ARRAY (ARRAY TS 11)
  - TEMPORARY BARRIER (TYPE K)
  - DIRECTION OF TRAVEL
  - REMOVE BASE AND SURFACING (EXIST ROAD)

USER=GibsonR1 12/1/2011 3:04:52 PM I:\CHSR\60022962\Task-02\_Merced-Fresno\CADD\Civil\Sheet\ROADWAY\RECENT\_UPDATES\12-1-11\WF-CT-5000-A\_revised\_2.dgn

REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY	
DRAWN BY	
CHECKED BY	
IN CHARGE	
DATE	07/27/2011

RECORD SET 15% DESIGN SUBMITTAL
NOT FOR CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**

**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

HYBRID

GENERAL STAGE CONSTRUCTION &  
TRAFFIC HANDLING APPROACH

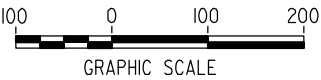
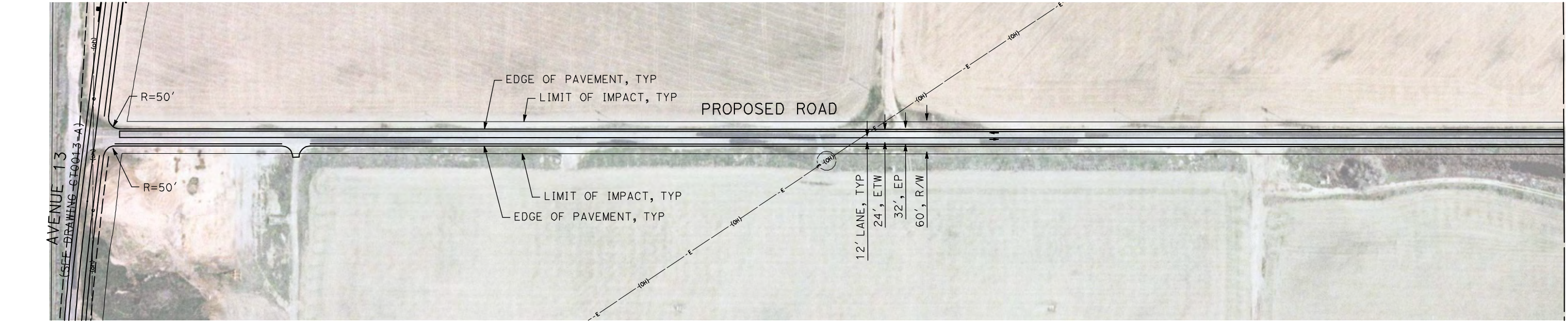
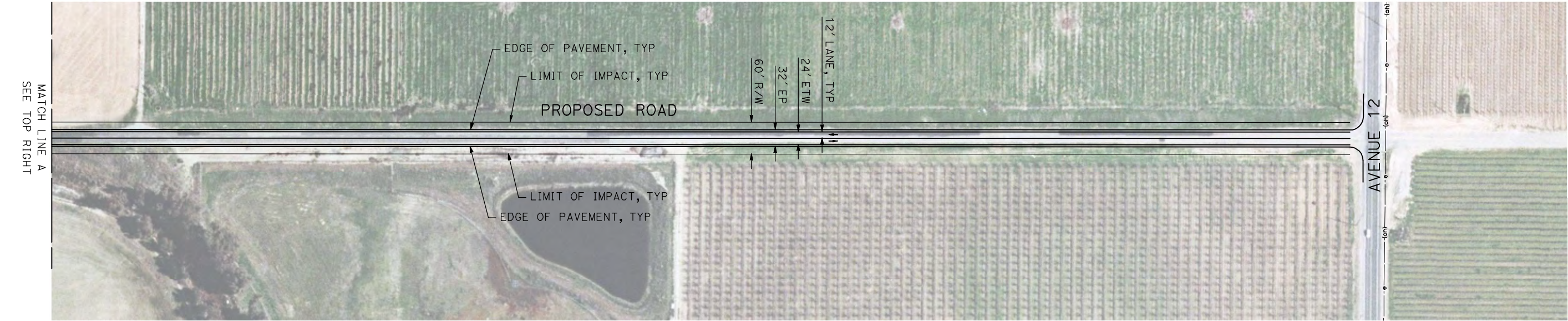
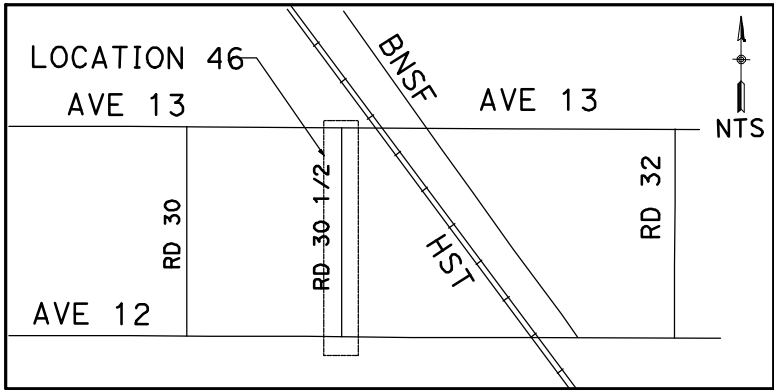
SHEET 1 OF 1

CONTRACT NO.	HSR06-007
DRAWING NO.	CR9192-B
SCALE	NO SCALE
SHEET NO.	### OF ###



5/1/2011 1:52:46 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 3 - Hybrid Local Roads\Layout\MF-CR-4000-A.dgn

GibsonR1



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**

**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2M HILL**



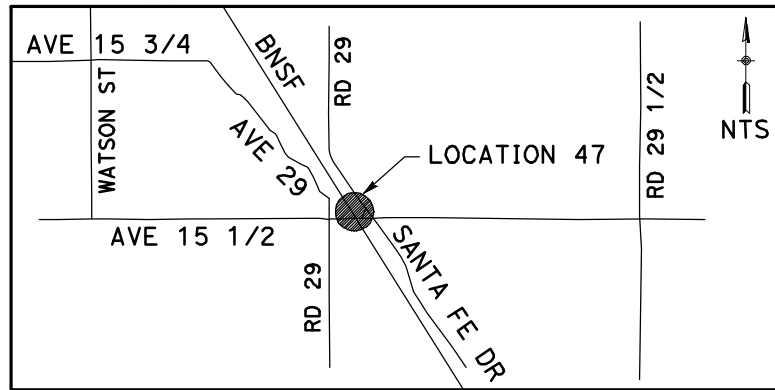
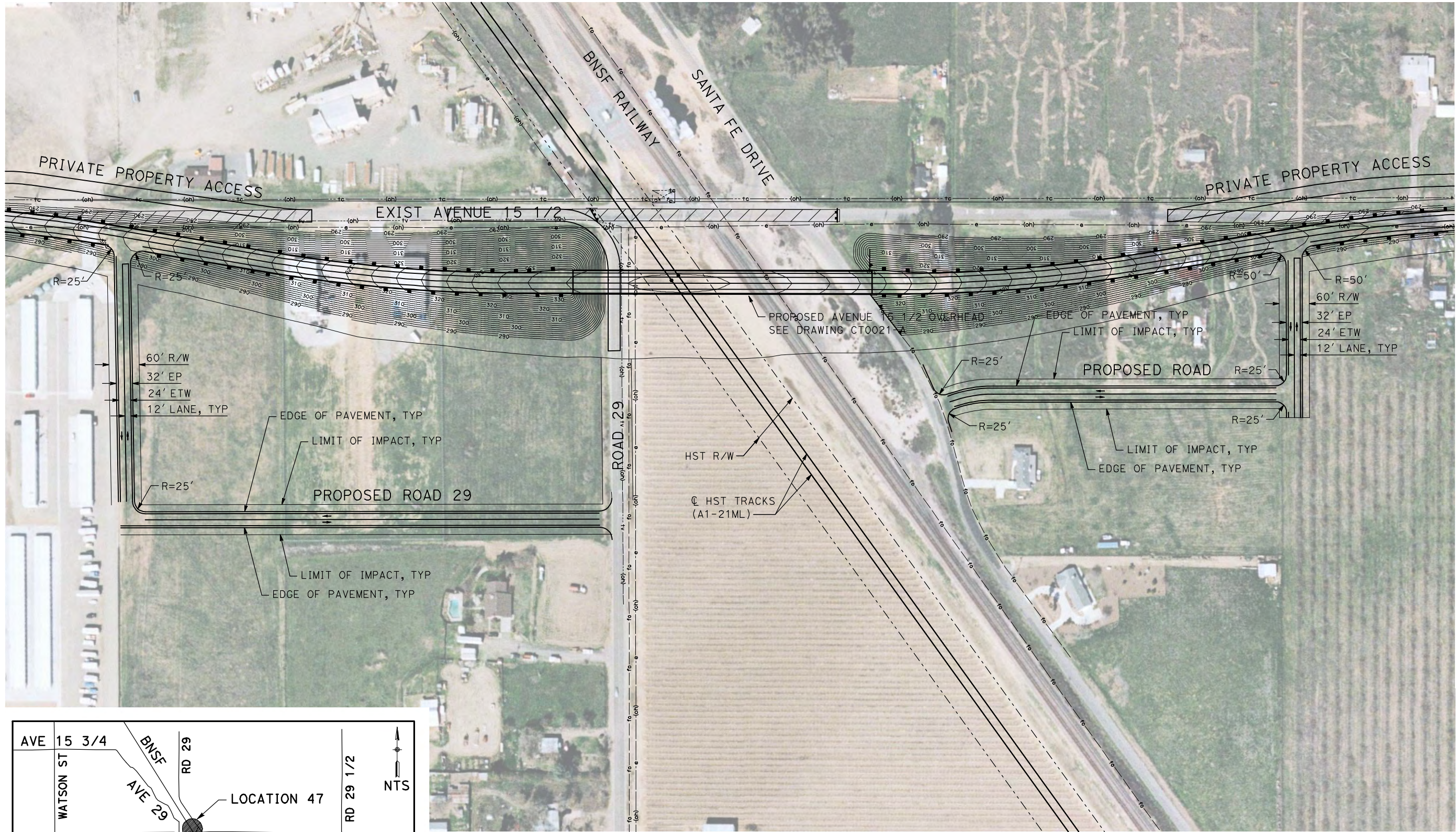
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
LOCAL ROAD - ROAD 30 1/2  
LAYOUT  
SHEET 1 OF 1

CONTRACT NO.  
HST06-007  
DRAWING NO.  
CR4000-A  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



5/1/2011 1:52:56 PM i:\chsr\60022962\task-02\_merced-fresno\cadd\civil\sheet\roadway\hybrid\Volume 3 - Hybrid Local Roads\Layout\WF-CR-4001-A.dgn

GibsonR1



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**



Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811





**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

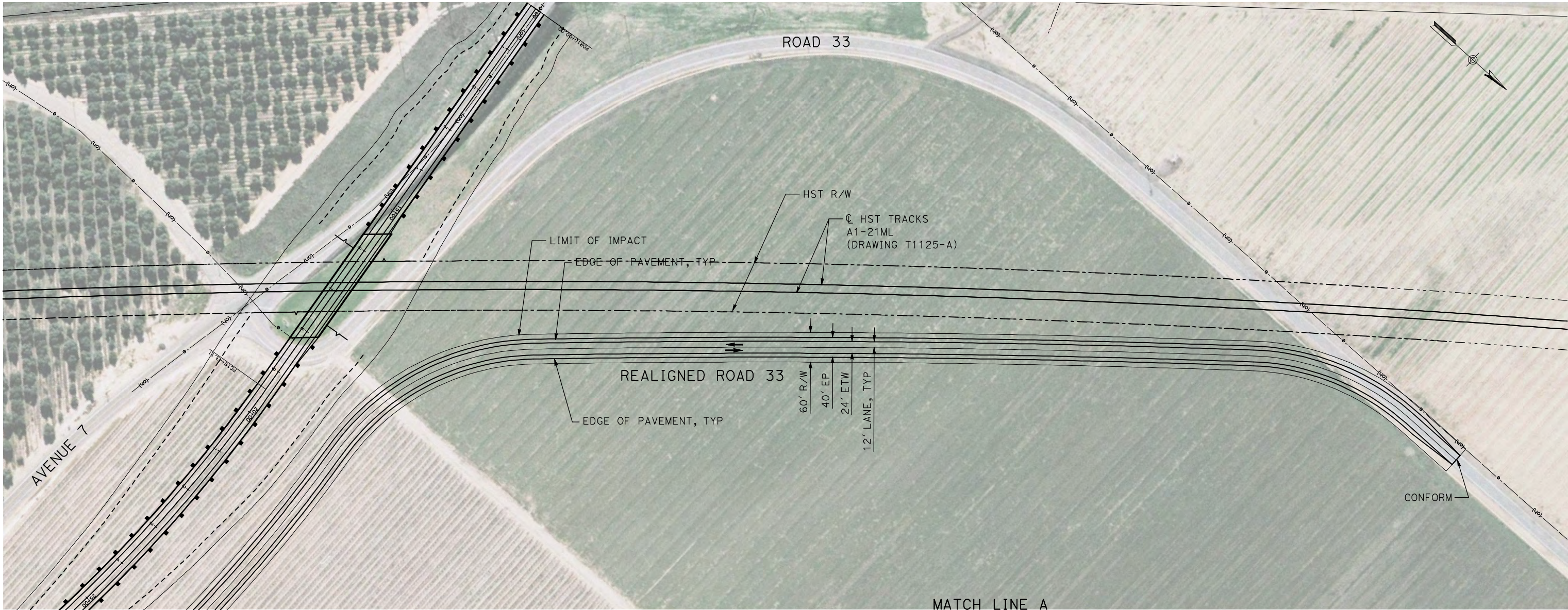
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MAIN LINE - (HYBRID)  
LOCAL ROAD - ROAD 29  
LAYOUT  
SHEET 1 OF 1

CONTRACT NO.	HST06-007
DRAWING NO.	CR4001-A
SCALE	AS SHOWN
SHEET NO.	OF ###



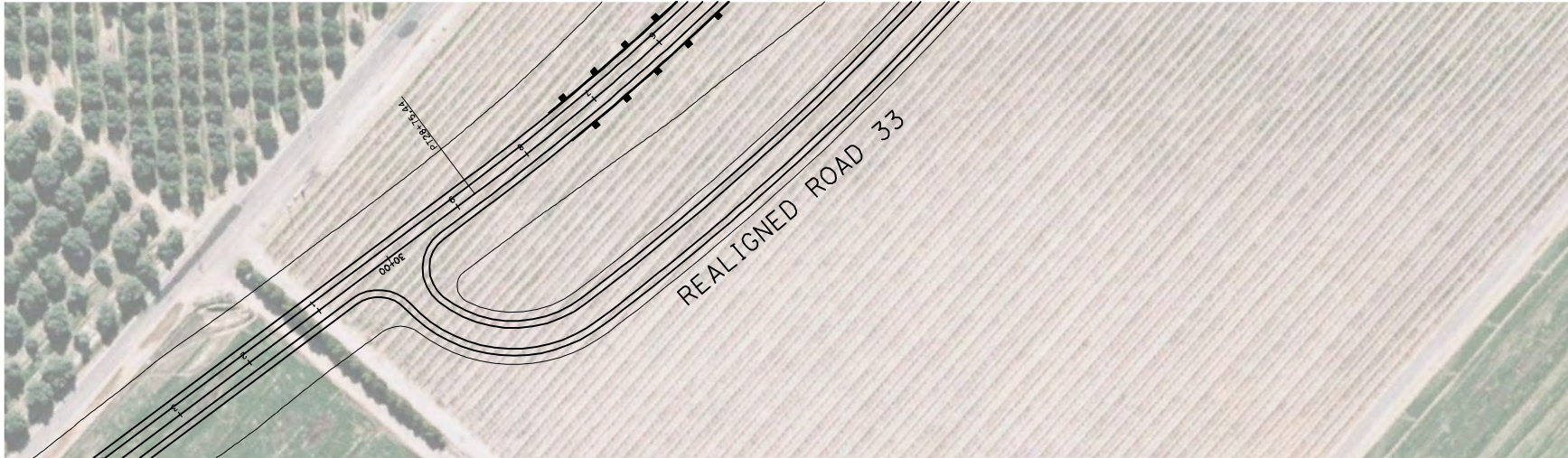
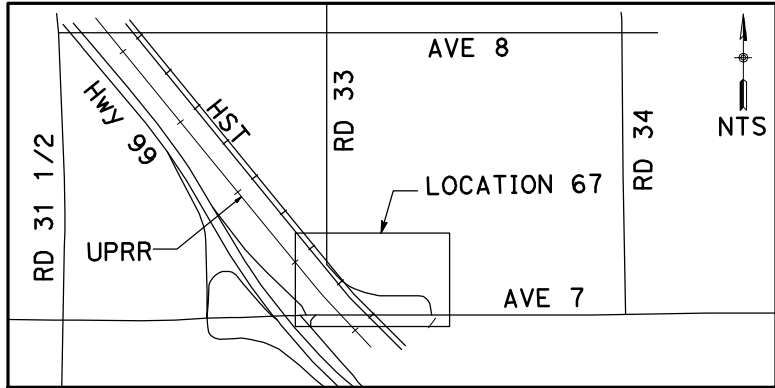
5/2/2011 4:01:13 PM I:\CHSR\60022962\Task-02\_Merced-Fresno\cadd\Civil\Sheet\ROADWAY\A1-Ave24\Volume 3A - Ave 24 Wye Local Roads\Layout\Common with Ave 21\WF-CR-4018-A.dgn

GibsonR1



MATCH LINE A  
SEE BELOW RIGHT

MATCH LINE A  
SEE ABOVE LEFT



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
R. GIBSON  
DRAWN BY  
H. PHAN  
CHECKED BY  
A. SILVER  
IN CHARGE  
A. BOONE  
DATE  
04/29/2011

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
BNSF MERCED CONNECTION - AVE 24 WYE  
LOCAL ROAD - ROAD 33  
LAYOUT  
SHEET 1 OF 1

CONTRACT NO.  
HST06-007  
DRAWING NO.  
CR4018-A  
SCALE  
AS SHOWN  
SHEET NO.  
### OF ###



# CALIFORNIA HIGH-SPEED TRAIN

## Traction Power Plans

"Excerpts of Record Set  
For Procurement Purposes Only.  
Avenue 17 to Veterans Blvd"

Record Set  
15% Design Submittal  
**Merced to Fresno Section**

Traction Power Facilities  
~~BNSF~~, ~~UPRR/SR99~~ and Hybrid Alternatives

May 2011



**CALIFORNIA**  
High-Speed Rail Authority

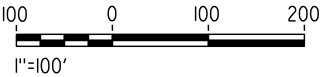
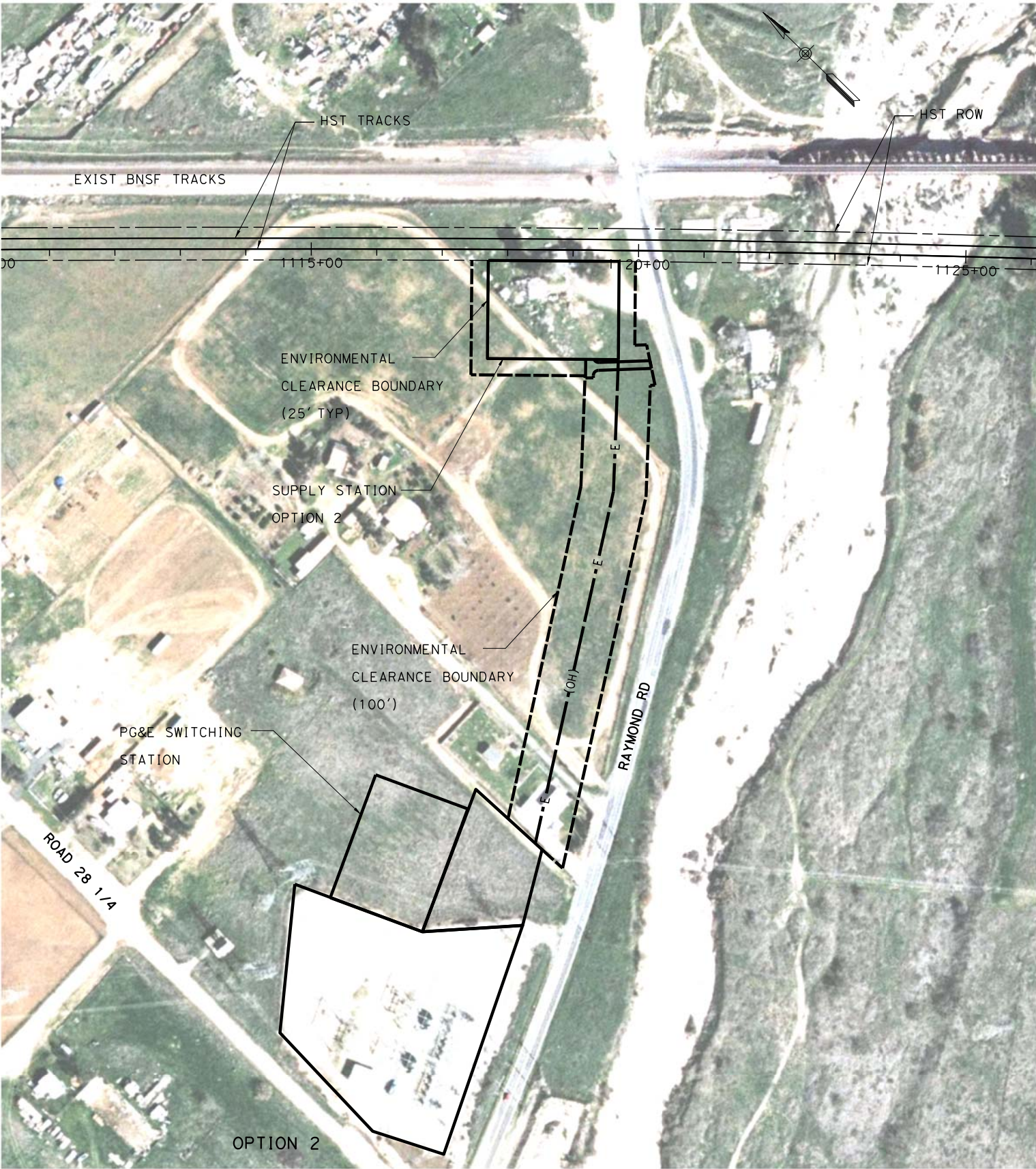
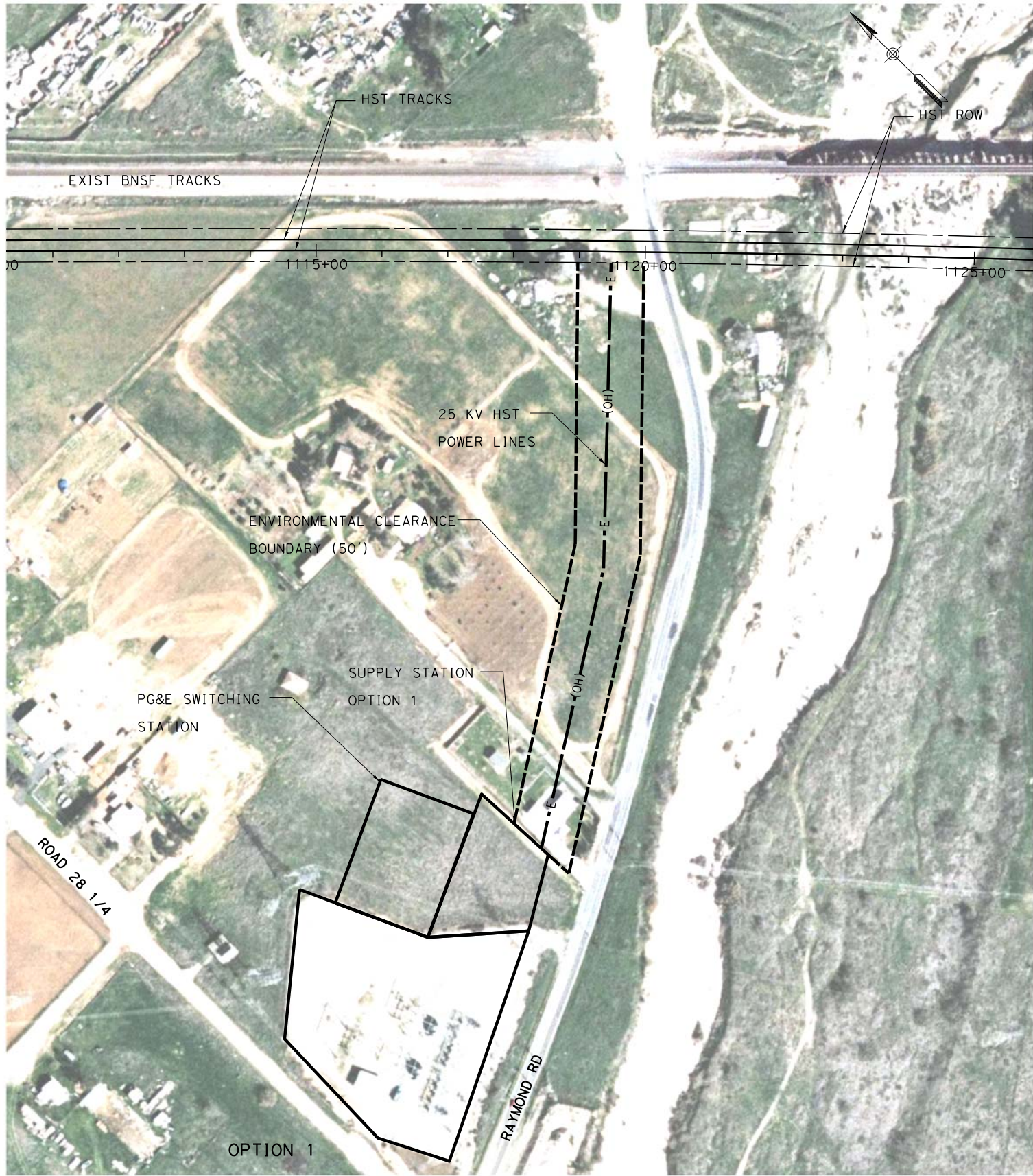


**U.S. Department of Transportation**  
Federal Railroad Administration





2/16/2012 9:58:23 AM \\usscrip001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDSA\Rev 1 - 15% Plans\OPTION 1\TPSS\MF-YJ1008-H.dgn



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
T. ABERE  
DRAWN BY  
T. ABERE  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

RECORD SET  
15% DESIGN  
SUBMITTAL

NOT FOR  
CONSTRUCTION

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

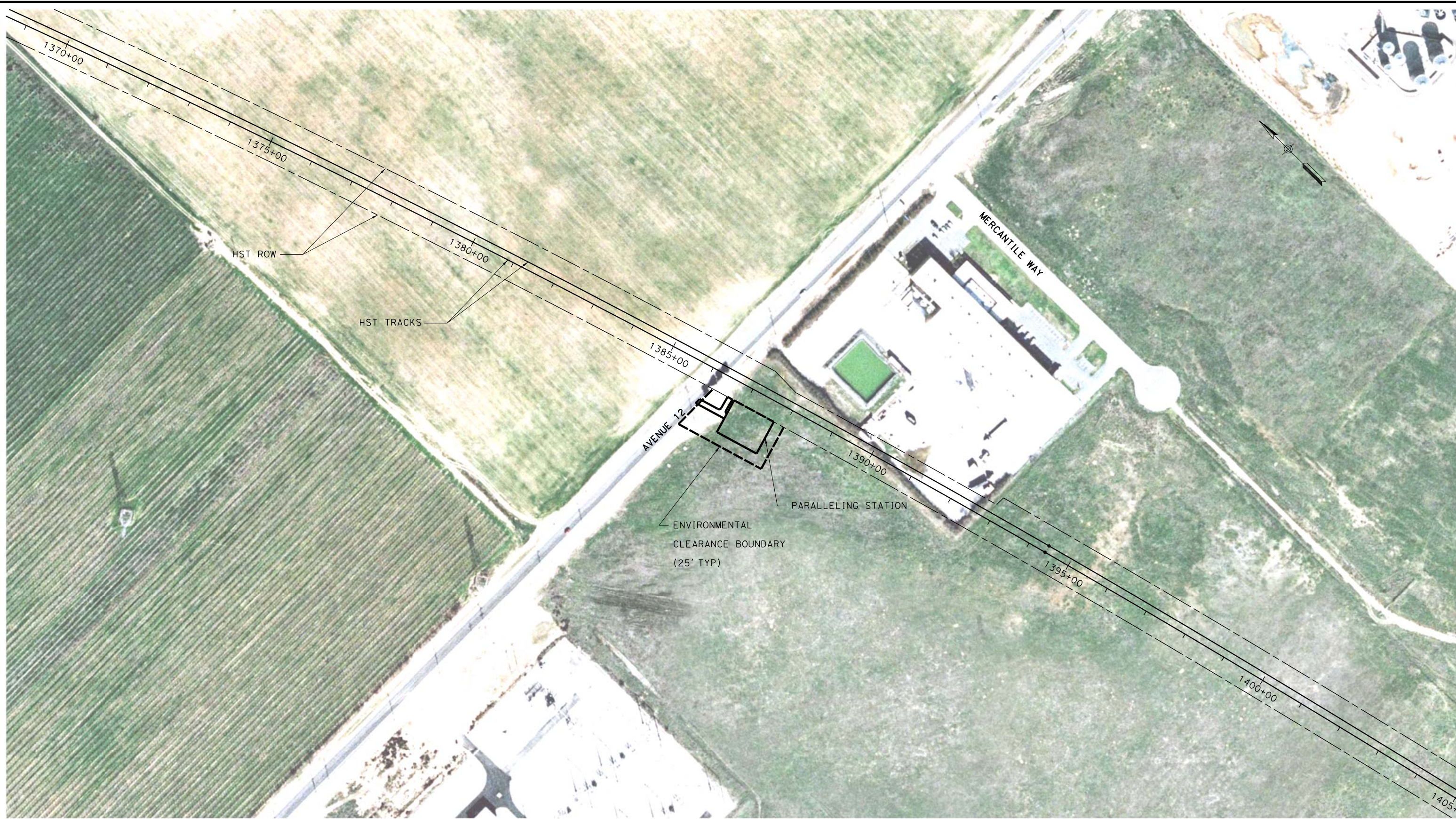
**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

ALTERNATIVE HYBRID  
TRACTION POWER SUPPLY SITES  
SUPPLY STATION #2  
STA. "A1-21-ML" 1119+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
YJ1008-H  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



2/16/2012 9:59:22 AM \\usscrifp001\cadd\chsr\60022962\Task-03\_Merced-Fresno\CADD\Rail\Design\SHIELDS\Rev 1 - 15% Plans\OPTION 1\TPSS\MF-YJ1009-H.dgn  
shieldsa



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY  
T. ABERE  
DRAWN BY  
T. ABERE  
CHECKED BY  
A. BOONE  
IN CHARGE  
A. BOONE  
DATE  
02/17/2012

**RECORD SET**  
**15% DESIGN**  
**SUBMITTAL**  
  
**NOT FOR**  
**CONSTRUCTION**

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811  
**CH2MHILL**



**CALIFORNIA**  
HIGH-SPEED RAIL AUTHORITY

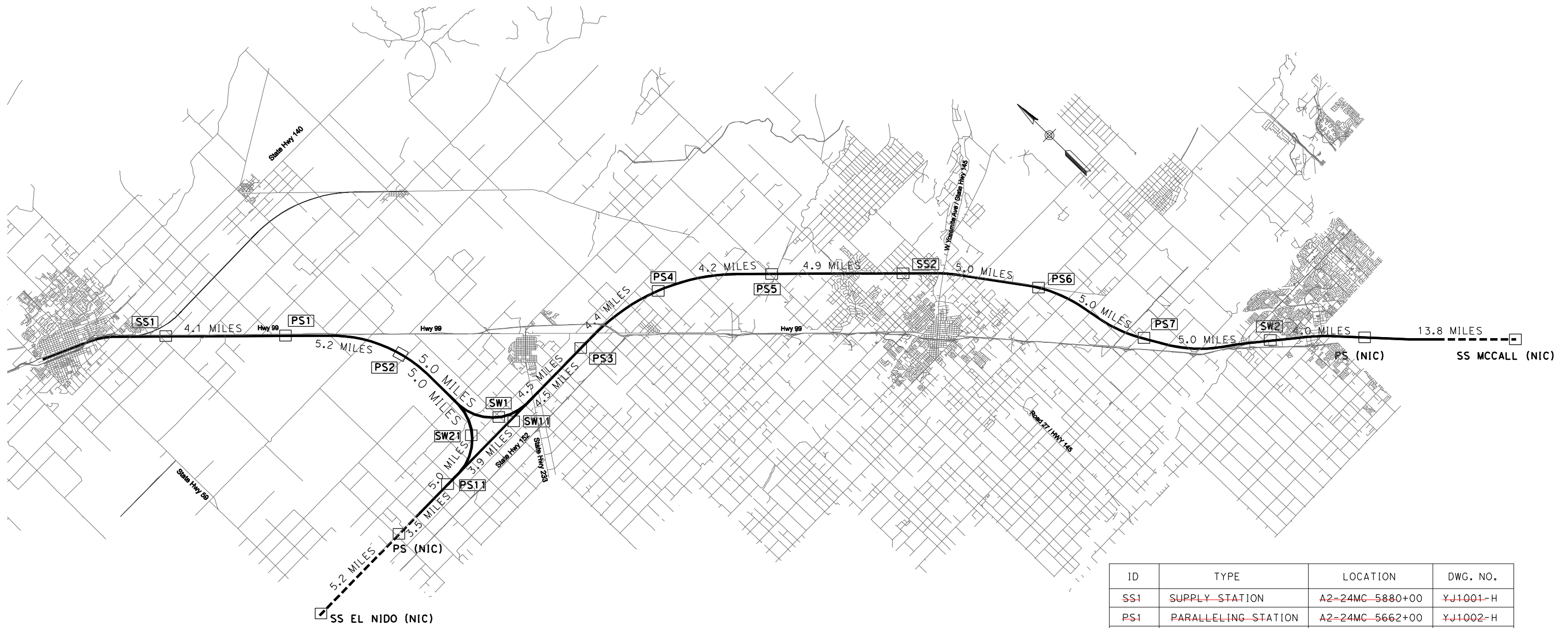
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**  
  
ALTERNATIVE HYBRID  
TRACTION POWER SUPPLY SITES  
PARALLELING STATION #6  
STA. 'A1-21ML' 1385+00

CONTRACT NO.  
HSR06-007  
DRAWING NO.  
YJ1009-H  
SCALE  
AS SHOWN  
SHEET NO.  
OF ###



4/11/2011 4:55:52 PM P:\60022962\Task 02\_Merced-Fresno\cadd\Traction Power\Sheet Hybrid\WF-YB0100-H.dgn

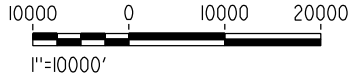
Aberet



"Drawings lined Out are not  
Included for Procurement Purposes Only"

ID	TYPE	LOCATION	DWG. NO.
<del>SS1</del>	<del>SUPPLY STATION</del>	<del>A2-24MC 5880+00</del>	<del>YJ1001-H</del>
<del>PS1</del>	<del>PARALLELING STATION</del>	<del>A2-24MC 5662+00</del>	<del>YJ1002-H</del>
<del>PS2</del>	<del>PARALLELING STATION</del>	<del>A2-24MC 5390+00</del>	<del>YJ1003-H</del>
*	<del>SW1</del>	<del>A2-24MC 5127+56</del>	<del>YJ1004-H</del>
<del>PS3</del>	<del>PARALLELING STATION</del>	<del>A1-24ML 1406+00</del>	<del>YJ1005-H</del>
<del>PS4</del>	<del>PARALLELING STATION</del>	<del>A1-24ML 1640+00</del>	<del>YJ1006-H</del>
<del>PS5</del>	<del>PARALLELING STATION</del>	<del>A1-24ML 1861+00</del>	<del>YJ1007-H</del>
<del>SS2</del>	<del>SUPPLY STATION</del>	<del>A1-21ML 1119+00</del>	<del>YJ1008-H</del>
<del>PS6</del>	<del>PARALLELING STATION</del>	<del>A1-21ML 1385+00</del>	<del>YJ1009-H</del>
<del>PS7</del>	<del>PARALLELING STATION</del>	<del>A1-21ML 1650+00</del>	<del>YJ1010-H</del>
<del>SW2</del>	<del>SWITCHING STATION</del>	<del>A1-FR 1866+80</del>	<del>YJ1011-H</del>
*	<del>SW1.1</del>	<del>A1-24ML 1168+60</del>	
<del>SW2.1</del>	<del>SWITCHING STATION</del>	<del>A2-24WC 222+00</del>	<del>YJ1012-H</del>
<del>PS1.1</del>	<del>PARALLELING STATION</del>	<del>A2-24ML 960+00</del>	<del>YJ1013-H</del>

\* SAME LOCATION SERVES BOTH ALIGNMENTS



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/15/2011

<b>RECORD SET</b> <b>15% DESIGN</b> <b>SUBMITTAL</b>
<b>NOT FOR</b> <b>CONSTRUCTION</b>

**AECOM**  
Technical Services, Inc.  
2020 L Street, Suite 300  
Sacramento, CA 95811

**CH2MHILL**



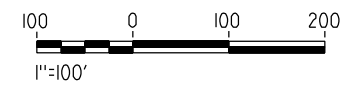
**CALIFORNIA HIGH-SPEED TRAIN PROJECT**  
**MERCED TO FRESNO**

ALTERNATIVE HYBRID  
TRACTION POWER SUPPLY SITES  
KEY PLAN

CONTRACT NO. HSR06-007
DRAWING NO. YB0100-H
SCALE -
SHEET NO. OF ###



4/11/2011 4:58:45 PM p:\60022962\task 02\_merced-fresno\cadd\traction power\sheet\hybrid\WF-YJ1010-H.dgn  
Aberet



REV	DATE	BY	CHK	APP	DESCRIPTION

DESIGNED BY T. ABERE
DRAWN BY T. ABERE
CHECKED BY A. BOONE
IN CHARGE A. BOONE
DATE 04/15/2011

**RECORD SET  
15% DESIGN  
SUBMITTAL**

**NOT FOR  
CONSTRUCTION**



**CALIFORNIA HIGH-SPEED TRAIN PROJECT  
MERCED TO FRESNO**

ALTERNATIVE HYBRID  
TRACTION POWER SUPPLY SITES  
PARALLELING STATION #7  
STA. 'A1-21ML' 1650+00

CONTRACT NO. HSR06-007
DRAWING NO. YJ1010-H
SCALE AS SHOWN
SHEET NO. OF ###